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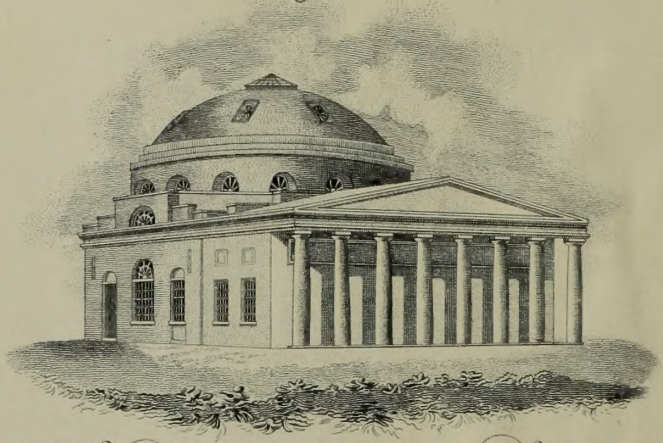

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1890's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Bellies, Historical Librarian/Preservation Officer; Maria Milagros Pildas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hoode, Alex Scrour and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archives (archives.lib.umaryland.edu) and the Internet Archive (www.archive.org).

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1833, 1834 (b)

Newcomer, Samuel F.	Dyspepsia	1834
Ohr, Charles H.	Inflammation of the Gastro-Intestinal Mucous Membrane	1834
Harris, Thomas B.	Cynanche Trachealis[1]	1834
Richards, John C.	Consumption	1834
Fooks, Kendal	Hernia	1833
Osborne, A. M.	Milk Sickness	1834
Duke, Basil	Pneumonia Biliosa	1834
Turner, John	Acute Hepatitis	1834
King, Hiram	Remarks on the Medical Theories of Brown, Cullen and Rush	1834

1- Text lost in inner margin during binding process

HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1833) 1834 (b)

Newcomer, Samuel F.	Dyspepsia	43p.
Ohr, Charles H.	Inflammation of the Gastro-Intestinal Mucous Membrane	45p.
Harris, ~~W.~~ Thomas B.	Cynanche Trachealis	21p.
Richards, John C.	Consumption	15p.
Fooks, Kendal (1833)	Hernia	37p.
Osborne, A. ~~W.~~ M.	Milk Sickness	9p.
Duke, Basil	Pneumonia Biliosa	24p.
Turner, John	Acute Hepatitis	21p.
King, Hiram	Remarks on the Medical Theories of Brown, Cullen and Rush	48p.

An Inaugural Thesis on Dyspepsia

Submitted to the examination, of the Provost, Trustees, and Professors, of the Medical Department of the University of Maryland For the degree of Doctor of Medicine

by

Samuel H. Newcomer
of Maryland

Baltimore March the 5th 1834.

18874

UNIVERSITY OF MARYLAND
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SCHOOL OF MEDICINE

To Dr. George W. Boerstler,

of Washington County Maryland.

My early friend & very efficient preceptor,

Permit me thus, to express the sense of my gratitude, for the kinde offices you have on so many occasions done me. And be assured, that neither time, or distance, shall ever erase from my minde, those sentiments of respect I now entertain for you, and which your exalted talents, and superior worth, will never fail to elicit.

Your humble friend,

and former pupil.

The author.

When a master of the profession, favours us with a treatise on an individual disease, we take it for granted, that if it is not perfect, it still has much to recommend it. Hypothesis perhaps, has given place to facts, some long standing error dispeled, & a rational theory established, whereby, we are enabled fearlessly to meet, & successfully to combat it. But the student must mark out to himself an humbler task. He acquires his knowledge, not by experience, & observation, his time for this, is not yet come, but by reading, & reflection. He receives his profession as it now stands, the result of the observation of thousands, & the experience of centuries. He must be content to speak, & think, as others have spoke & thought before him. True he accumulates many facts, & many resources are presented to his choice. This frequently elevates him high, on the scale of his own importance, & he feels himself fully prepared, & equipt, to meet, & subdue, all the diseases, entailed upon man, & it is only when he enters upon practice, that his delusion

is apparent. Now he knows it to be one thing to read of causes, symptoms, & cure, & cures on the gilted page of authors, & another, to realize the one, & effect the other, in the chamber of the sick. Too soon, does he finde that many of his theory do not bear him out, & that, most, his remedies are sometimes effectual, they are not invariably so. Hence we infer that so long as the student is engaged in the study of medicine, without the experience of practice, he can only admire, compare, & choose from the greate & promiscuous mass that is before him, adopt what is in accordance with his present views, & reject what is not But all that he now approves, or condemns, must be tested by time & experience, & then too, he is often compelled to let go of the one, & take up the other. Such then, being the condition of the student, he cannot but be indifferent, which of the many diseases that demands, the attention of the physician, he chooses as the subject of his thesis.

Dyspepsia, usually classed with chronic affections

of the alimentary canal, is one of frequent occurrence, & this fact, has perhaps alone determined us, in our choice. For frequent as it is, & fatal as are its consequences on the health, & happiness of man, it is not on that account the better understood, but on the contrary, affords a standing theme of speculation & mismanagement. The very great discrepancy of opinion in relation to this disease, eloquently plead its claims on the profession.

In Dr. Goods nosology dyspepsia is the 7th species, 5th Gen. Limosis (morbid appetite, 1st Order. Enterica (Affecting the alimentary canal), of his first class. Coelica. (Diseases of the digestive functions.)

As a general rule, we do not consider nosology of much practical importance, & therefore beg to be relieved from any restraint, it might impose upon us, in our subsequent remarks on this subject.

We propose to speak of dyspepsia in its most precise sense, ~~of~~ such cases only, where the stomach is primarily & paramorently diseased. The connections of the stomach is so

extensive, that there are few diseases, which do not at one period, or another, more or less implicate, it & give rise to dyspeptic symptoms, so that if we would treat of it, as symptomatic of other affections, our task would be almost an endless one, & greatly exceed the limits of our present design. Nor do we propose to treat of all the diseases, which owe their principal origin to this affection of the stomach. If this organ is so essential to the healthy action, of all the functions of the animal organism, as to become involved in the disease of each or all, it follows as a necessary consequence, that when it becomes the seat of disease, that these organs in their turn, also become secondarily affected.

We will arrange what we have yet to say on this subject under three different heads viz. 1st the various causes of this disease, 2dly the symptoms & pathology, & in the third place pass in review the various remedial means which experience, & our knowledge of pathology, have pointed out as the most effectual.

But before we take up this subject, more in detail, it may not be amiss, to say a few words on that condition of ~~of~~ the stomach, which is necessary to the healthy performance of its functions.

Two conditions, it appears to be satisfactorily proven are necessary to the healthy action of the stomach. 1st A due tone, & peristaltic action of its muscular coat, by the operations of which the food is embraced in its parietes & thoroughly mixed with the gastric juice & is also urged towards the duodenum, as the process of chymefication is accomplished. 2d The presence of a sufficient quantity of healthy gastric juice. That the gastric fluid converts the aliment into chyme appears now to be an established fact. The late experiments of Spallanzani of Stevens, of Gosse, & the more recent ones of Tiedemann & Gmelin of Heidleberge have settled this point.

The agency of the bile in chylefication is much less obscure, & indeed there are some eminent writers who deny, that it has anything to do with the process.

Dr. Graham begins his preface to his work on indigestion, by saying that the "liver is a gland of waste" Prof Dunglison, of the university of Maryland whose opinions on this, as well as on all subjects connected with the science of medicine, are of the utmost value, is disposed to admit, after examining the views of Magendie. M M Leuret & Lassaigne, & the weight of their experiment, "that the bile & the pancreatic fluids are the chief agents in the conversion effected in the duodenum". It may not be improper to observe, that the weight of testimony against the agency of the bile, in chylefication is very great, but still we think the point at issue is far from being settled. The experiments on both side are very discordant, & far from being conclusive. Among the many eminent men of our profession, who look upon the bile as being wholly excrementitious, we may number our very excellent & distinguished professor of Anatomy Dr. Geddings.
In reflecting on these discrepancys, we are enabled to

draw one important inference viz that there are yet many parts of the whole organism of man, whose functions are veiled from our sight. And on the other hand, how humiliating is it not, to the pride & boasted knowledge of man, to see the brightest luminaries, that adorn the galaxy of medical science, diametrically opposed to each other in reference to the function of an organ, so prominent as the liver, whose connections are so extensive.

Fortunately for us however, when great heads split small ones can pass through the schism. And we will merely observe, that we do not consider the bile excrementitious, in every respect. We believe to be so, altogether, in reference to the blood from which it is secreted, & that the liver & spleen both produce some modification in the blood, in the same way that the lungs do, & which is essential to health, especially so far as the liver is concerned. But on the other hand we think it more than probable, that the bile does materially aid the formation of chyle, in the duodenum, or else why would it have been directed to enter the alimentary canal at that point?

How far the bile is necessary to chylification & into what way it acts we leave to others to determine, for the present.

Causes of Indigestion— From what has been said, it will be easy to conceive, that anything that will produce deficient & irregular action of the muscular coat of the stomach, & a deficient or vitiated secretion of gastric juice, will be the cause of dyspepsia. Both these functions are under the immediate influence of the nervous power. So that their healthy performance, is necessarily deranged by anything that causes a diminution of nervous energy, or an irritation & sensibility of the nerves themselves. Hence all agents capable of producing dyspepsia, do so by interruption the regular supply of nervous influence, to the stomach, or by irritating the nervous extremities of the mucous membrane of the stomach, or by producing both these effects together.

Mental emotions constitute the first variety of causes viz: those which interrupt a regular supply of nervous influence to the stomach. That dyspepsia can be induced

by the state of the minde, will not appear so astonishing, when we reflect how sensibly the influence of the minde on various organs, as the kidneys, rectum &c is felt, as we would suppose at first sight. The sympathetic connection between to stomach & sensorium commune is greater than that of any other organ, the one invariably sympathizing with the other. We will have occasion to explain several phenomena, upon this fact, when we come to speak of symptoms. An emotion of the minde frequently suspends the keenest appetite for a time, & with it the process of digestion. Should this emotion be of long continuance or frequent occurrence, unmanageable dyspepsia often arises. Obstinate dyspepsia results from long continued grief & depression of minde, these conditions of the minde. Sedentary habits together with intense application of the minde frequently give rise to this disease, we are hower rather disposed to ascribe the blame to a want of exercise, in this case. These are but a few of the causes of dyspepsia, acting through the medium of our senses, as every thing that is calculated

to disturb, the equilibrium between animal & organic life, if long continued will produce dyspepsia, & this is especially the case if the person is naturally feeble or delicate. We will therefore proceed to the consideration of those causes which act more prosperfully, & sensibly, because they are in direct contact, the sentient extremities of the nerves of the mucous membrane of the stomach. In accomplishing this we promise nothing more, than just to repeat what we find all the different authors have said on this subject.

If any thing is reduced to a pathological axiom, it is, that no irritating agent can remain long in the stomach, without derranging its secreting function, & hence every permanent irritation of the stomach, must inevitably produce dyspepsia. We are tolde that "over distention of the stomach, with indigestible article of food is a common source of indigestion". This is easily explained, when we consider that the food which long resists the powers of digestion is at once a source of direct irritation, & besides it

will soon enter into decomposition, by the fermentative process, by which new combinations are evolved such as acids, gases &c & which will greatly add to the already too irritating contents of the stomach. Food long retained in the stomach will produce dyspepsia in another way viz, the muscular powers of the stomach will be diminished, by its long continued, & ineffectual efforts, as well as by over distention, & the presence of acids, gases &c. When indigested food, passes into the duodenum, derangement of the liver, pain, & diarrhoea ensue. When this irritable condition of the stomach is brought on by imprudence in use, & choice of diet, a slight additional cause will only be required to keep up the disease & to increase it. Dr Philip who has devoted much time & talent to the investigation of this disease, asserts that over distention of the stomach is one of the most common causes of dyspepsia. This is also attested by Drs Gregory, Eberle, Potter & a host of others. Dr Eberle however does not think, "that it is so much by over distention, of the muscular coat of the

stomach, that indigestion is caused, as by a mere excess of food beyond what the stomach can digest." He explains this view of the subject in the following intelligible manner. "Suppose the utmost power of the stomach to be capable of digesting ℥xvi of food, at a time, it is manifest, that if ℥xx are taken, some of it will remain either in a partial or wholy undigestible state in the stomach, a longer time, than is compatible with a healthy condition of the organ. This portion will therefore irritate the gastric nerves, enter more or less, into a state of chemical decomposition, & give rise to a deficient or vitiated secretion of gastric fluid in the stomach, as well as debility of its muscular tunic." This explination based upon known laws of physiology proves one important fact viz. That when the stomach receives in a given time, just so much food as is consist with its healthy action, & still more be taken in during this time, no matter how congenial to the stomach, when in a condition to receive it, becomes, as much a source of irrita-

tion & finally of disease as any other substance, though totally indigestible. When an excess of food remains in the stomach, as above stated, it cannot be digested, because there is a want of gastric juice, & muscular action, which this organ cannot afford in its exhausted & debilitated condition. And in this manner violent dyspepsias are produced.

It must not be infered, from what has been said, that all persons committing this error in quantity, or quality of food, are suddenly affected with dyspepsia — far from it. There are few persons that have not been guilty of such imprudence, & we have no doubt, that many thousands live to a good old age, without ever being in the least affected with this disease, & who perhaps never spent a thought on the subject of diet. But persons of delicate constitutions, & those who have long been exposed to the predisposing causes, as sedentary habits, continued grief &c. are exceedingly liable to have the disease brought on in this way.

External injuries also gives rise to dyspepsia, especially in feeble persons. Still, as we have said, overdistension is a fruitful

source of indigestion, amongst all classes & under all circumstances, & it is therefore, worth noting a piece of the causes that lead to this error, which so frequently entails wretchedness & woe upon its victims, & often ending, after years of indescribable torture, in death itself.

One of the most common causes of over-distention is eating too fast. Dr Philips explains it in the following words. "The appetite subsides only in proportion as the gastric juice becomes mixed, & is as it were neutralized by the food. When we eat rapidly time is not given to the gastric liquor, to combine with that part of the food, which presents to it; the sensation of hunger therefore continues, & we continue to eat until so much food is taken, that the whole gastric juice, which the stomach is capable of supplying during the digestive process, is not sufficient to effect the due chymefication of it. Whereas when we eat slowly, so that a proper time is given for the combination to take place, the appetite abates before the stomach is overcharged. Every one has occasionally observed, that if his meal is interrupted for ten or fifteen minutes after

having eaten perhaps, not one third of the usual quantity, he finds that he is satisfied. The gastric fluid, which had accumulated, has had time to combine with, & be neutralized by the food he had taken. It is for the same reason that a few mouthfuls of food taken a little before dinner will often totally destroy the appetite, especially in delicate people, in whome the gastric fluid is secreted in a small quantity, or of a less active quality." There are also other causes which lead to this evil. Food not sufficiently fine for the stomach, will require a longer time to become neutralized by the gastric fluid, & the sensation of hunger continues, & it is in this way that imperfect mastication aids in bringing on dyspepsia. A change of dishes, & the use of high seasoned diet, helps up an artificial appetite, & the stomach is sure to be overloaded. The gastric fluid will also become weakened, by taking too much drink whilst eating, or soon afterward. This has a tendency to keep the food in the stomach longer than its usual time, because the gastric fluid is diluted & acts more slowly. Food is sometimes retained in the stomach al-

though in a perfectly digestive form, from a want of peristaltic action in the muscular coat of the stomach. We do not know, how this state of muscular inactivity can exist, at the same time that the stomach is capable of supplying a sufficient quantity of healthy secretion. But we are still persuaded that it is sometimes the case. Muscular inability may be induced for a time, from a general laxity of fiber, but surely the function of secretion must sooner or later become implicated. The same causes that we have mentioned, as giving rise to debility, & irritability, will also produce acute, or subacute inflammation, of the stomach & give rise to the third form of dyspepsia. Sudden changes of temperature, heat, cold, moisture, fatigue, watchfulness &c a variety of other causes of this affection, might still be added but the list would greatly exceed the practical utility arising from it, & we presume the physician will always have penetration enough to expose them. There are also many things that would produce dispepsia in one person, & would not in the least affect the stomach of another. The habit,

occupation, & of the patient must always be taken into consideration, & this will greatly aid us, in coming at the true cause of the disease.

Symptoms & Pathology. Symptoms are the outward evidences of disease. The external signs of the presence of internal derangement. The pathology & symptoms of disease are intimately connected. This connection stands, upon the broad, & intelligible basis of physical laws, & is as readily explained as any other phenomena, of natural phylosophy. The first will produce the second, & the one indicate the presence of the other, as invariably, as effect succeeds a cause. But notwithstanding, the animal economy is governed by the same laws, that preside over every other natural operation, they are very far from being so well understood.

This is the department of our science that strike holds out many inducements for us to enter upon. It is on this field, that Bichat, Laennec, Broussais & many other have become immortal — 'tis here that hunard more labour, & we well know that there is a recompence in reserve

for them — & we are impatient to hail the day, when the result of their labors will be made known to the world — Science advanced & mankind blest.

Was this the place to indulge our feelings on a subject so dear to every philanthropic breast, we would say, that there ~~exists~~ reason to hope, that much of all this will be done in our own country. Do not the arts & sciences rapidly advance around us? Has not the science of medicine been signally fostered? Is not Rush, who first paved the way, to a successful treatment of the yellow fever, that arch-tyrant enemy of our race immortal? Is he who perfected the arts & forever settled the non-contagiousness of that disease, and disarmed the phantome that has for ages, enervated the moral & physical powers of man, at the very time too, when mostly wanted less so? Do you ask where is the surgeon & physician, the priests of whose exalted genius & talents have shed a genial ray of unextinguishable light over both hemispheres & which daily elicit tears of gratitude from suffering humanity, we answer here. Are not the brilliant discoveries in anatomy

physiology, pathology chemistry & all the collateral branches daily resounds in our ears. This is not a mere picture of fancy — but demonstrated truth. Nor do we conceive it difficult to account for this rapid progress of science in our own highly favored land. The dogmas of school, national prejudices, and that degrading & unwarrantable vice of jealousy existing between the contending institutions of Europe, has always been a standing barrier to the progress of their labours. But we are happy to say that this is not now so much the case, a more liberal feeling is being established & much good has already resulted from it. But it is our own country where alone liberal laws prevail, & free institutions exist, where prejudices & jealousys have no abiding place — where the merits of man is not influenced by the fear or favour of a despotic prince — where the arm & hypothesis of by gone days have no control — & where all his works must bear the scrutiny of an enlightened community — that we can reasonably look for the advancement of our science. Our pass board is honesty & truth our polar star, & everything we do, must bear the impress

of the first, & pass through the fiery ordeal of the other. But we must leave this & return to our subject.

The symptoms of dyspepsia present themselves in the same order with the causes, whose presence they indicate. When a case of dyspepsia occurs in an individual, but labouring under any chronic affection, & who has been previously healthy, we always finde that the appetite is first affected. It is variable, sometimes gone, & again very urgent. Colic pains, flatulent distention, & acid eructations are frequent. There is also an uneasy sensation of the stomach continually present. The bowels are constipated, & at this stage of the disease, the tongue is slightly coated with a white fur & the patient experiences languor & depression. The patient becomes irritable & dissatisfied. The least indigestible food taken into the stomach quickly irritates him, & the pulse is quick & tense. It is now also that all the symptoms are aggravated when food is taken; the colour & consistency of the stools are changed, & imperfectly digested food is passed off per anum. If these symptoms are not relieved, emaciation soon follows & the patient loses his strength.

His countenance becomes haggard, the sensations experienced at the stomach become distressing; the skin loses its healthy appearance, chilness & the functions of the cutaneous exhalents cease. Other organs now also become affected, the head is perhaps the first. Two kinds of dyspeptic headache are discribed by Dr Warner, the one occurring during chymefication, which is always slow & imperfect, & the other when the chyme has left the stomach, & passed into the duodenum. He distinguishes the first, by a languid pulse, the pulse is also feeble, the tongue is slightly coated white, with pale red edges; mistiness before the eyes, vertigo nausea, & uneasiness in the stomach, & sense of constriction about the fauces, coldness & numbness of the fingers, & a general feeling of weight about the brain. The second which has been called duodenal, headache by Dr Paris is known by a brilliant spectre, which constantly distresses the patient, by chilliness of the body, coldness & dampness of the hands & feet. The pain in the head is severe and attended with a sensation of coldness & tension of the scalp, & a sense of weight & tension in the eye balls,

the tongue is coated with a yellowish fur. The pulse is natural in frequency but always languid. Dr Paris states that a peculiar feeling of dryness & inactivity of the bowels, as if the intestines had lost their sensibility, & were unable to propel their contents, giving rise to a peculiar sensation of weight, & obstruction, may be regarded as a pathognomonic symptom of this variety of head ache. "This affection rarely continues longer than two or three hours."

"In a practical point of view" says Dr Eberle "it is of great importance to bear in mind that dyspepsia, may depend on two distinct morbid condition conditions of the digestive organs, viz, 1st On functional debility of the stomach from deficient, or vitiated secretions of the gastric fluid, & muscular inactivity, independent of vascular irritation, or inflammation. 2ndly On deficient or vitiated secretion of the gastric fluid, with vascular irritation, or chronic inflammation of the mucous membrane of the stomach & duodenum, & a morbidly increased peristaltic action of these organs.

"The characteristic symptoms of the former grade of in-

digestion are a weak appetite; tongue covered with white fur; absence of epigastric tenderness, except after a paroxysm of colic from flatulent distention, costiveness; acid & fœtid eructations; absence of habitual tension, & febrile irritation of the pulse, & the ability of bearing lean & tender animal food better than vegetable & farinaceous articles of diet.

"The phenomena which characterize the second, or inflammatory grade of the disease, are tenderness of the epigastrium on pressure, particularly about the region of the pylorus, & duodenum; a red chapped, & granulated appearance of the tongue; a firm tense & small, & somewhat accellerated pulse, with slight manifestations of febril exacerbations towards evening; emaciation; irregular action of the bowels, with frequent attacks of mucous, bilious or watery diarrhea, violent & protracted pain in the lower part of the epigastric region during the process of digestion; fullness about the edge of the false ribs, on the right side, an anxious & discontented countenance, (and an inability without great suffering to endure animal food & stimulants. It appears that the irritation or chronic inflammation of such cases is

seated in the mucous membrane of the pyloric extremity of the stomach & of the duodenum, connected usually with a congested state of the liver, & often with fecal accumulations in the colon. Hence the region of the duodenum & pylorus is always somewhat distended, & very tender to pressure in such cases; & these circumstances together with the tense, & quick pulse, furnish the most certain diagnostic marks of the existence of high mucous irritation, or chronic inflammation, in dyspeptic complaints."

We have lately seen a young dyspeptic, a friend of ours whose case could not with propriety, be referred to either of these varieties of Dr. Eberle. The prominent symptoms in the case were, weight & fulness of the stomach after eating, which continued ~~for~~ about two hours, the food then passed into the intestines, produced slight irritation & was evacuated for a time imperfectly digested. As soon as the fulness of the stomach passed off, the sensation of hunger would return, & as soon as food was taken, the same series of symptoms presented themselves. There was no pain, even pressure could not produce it,

The tongue was slightly coated with a white fur. We concluded that there was little more than a morbid irritability of the stomach in this instance, & we also had the extreme pleasure of seeing all the symptoms gradually subside, by a dietetic treatment alone. Whenever the stomach becomes irritable, or inflamed, it will generally extend along the whole tract of the alimentary canal.

Dyspeptics frequently complain of pain in different regions of the abdomen. There is sometimes a fixed pain in the region of the spleen & as this viscus is frequently ~~enlarged~~ found to be enlarged, the cause that led to it, may also have produced the pain felt in that region. The pain which dyspeptics complains of in the region of the pylorus, is the subject of frequent mistake, so far as its location is concerned, as the colon passes over it, & is also often the seat of disease. Dr Philip^{ce} says the best manner of distinguishing affections of the stomach, from those of the colon, are the digestive process in the latter case, being better performed; the state of the bile being less disordered, the patient not experiencing

the increase of uneasiness, which often comes on after meals & which continues for sometime, & often experiencing more less pain, or some other uneasiness in the region of the stomach a short time before the bowels are moved, & more or less relief after their action. There is sometimes much sensitiveness in the region of the pylorus, but this can generally be known from inflammation, from the state of the pulse which is accelerated in the latter case.

When speaking of the cause of this disease, we mention the emotions of the mind, as frequently giving rise to dyspepsia in some habit, & we wish now to add whenever dyspepsia is produced from other cause the minds always becomes sooner or later impaired. Hence it appears that the mental faculties are implicated in all varieties of dyspepsia. & this is one of most dreadful conditions of this disease. The dyspeptic is completely incapacitated for all the operations of mind or body, the least thing renders him miserable for a whole day. The exhilerating influence of cheerful company, pleasant health or innocent amusement afforde no comfort or ease.

As is emphatically & confirmed are miserable hypochondriacs, who render unhappy all those around him & to whom existence itself is a drudgery.

Treatment. The treatment of dyspepsia, like all other chronic diseases is very difficult. Patients labouring under this disease, seldom seek aid until ~~the disease~~ has made considerable progress, & extensive sympathetic affections induced. As dietetic regimen is of the first importance in the treatment of this disease, we will consider this part of the treatment, before we pass to the consideration of the remedial substances.

Rules of diet however cannot be effectual unless they are persevered in, & as this cannot be accomplished without the consent of the patient, it is of the utmost importance ~~to~~ impress upon his mind, what in reality is the fact, viz that he has the disease under his own control, & that without his aid, we can do nothing.

The treatment of all diseases, consist in removing the causes, & as diet & the manner it is used, is the most fre-

quent case of this disease, we at once have the reason why so much is expected from dietetic rules. Patients are generally advised to be regular in their meals, to make use of no more food than is necessary to keep up the powers of the system, & to masticate well what he does eat. He must ascertain by experience, what agrees best with him rejecting all articles of diet, that irritate his stomach with as much resolution as he would so many poisons, which in reality they are. This applies more particularly to such cases that depend on muscular debility alone. When the mucous membrane of the stomach is inflamed or in a highly irritable condition, all kinds of animal diet must be dispensed with, as it will almost in every instance increase the symptoms. The stomach seldom remains long in a state of debility, without becoming more or less sensitive & susceptible to be morbidly excited by articles of diet. Animal food is however still admissible in such cases, & is frequently better adapted than any other. A rigid adherence to diet & gentle exercise, will in most cases of this variety be all that

is required; laxatives & tonics are sometimes indicated. We will also remark of animal food, which from its stimulating properties, is so pernicious in dyspepsia depending on inflammation, is always more digestible than vegetables, & as the greatest indication in dyspepsia, from debility, is to obtain digestion at the smallest possible expence of the stomach, we should therefore always prescribe animal food. With a due proportion of stale bread. The animal food is digested with little labour on the part of the stomach, because it approximates nearer to the intimate constituent of Chyle than a vegetable. Animal food is less apt to enter into the fermentative process, by which flatus, gas &c is evolved, & which so greatly irritates the stomachs when debilitated.

To specify every article that should be avoided or used in the treatment of this disease, would be superfluous, nor is it even a difficult matter for the physician to decide on these, in such cases, the nature of the disease, the circumstances & habits of the patient will sufficiently direct his treatment on this head & we will therefore only add a few words on this part of our

subject, leaving the rest to the sagacity of the attendant

Of animals, venison, mutton, & tender beef are perhaps the best articles. Pork & veal must be avoided. Of the poultry tribe, ducks & geese are least digestible, fowl is best & turkey next. Hare partridge & woodcock afford a wholsome dish for the dyspeptic. The wing of the woodcock & the breast of the partridge are not so digestible, the fibres being more rigid & have from constant motion & hence the truth of the olde song — If the partridge had the woodcocks thighs,

I would be the sweetest bird that ever did fly

&

If the woodcock had the partridges wing

I would be the sweetest bird that ever did sing.

As a general rule, roasting is the best mode of preparing meats for dyspeptics. Soft boiled eggs sometimes agree, and then an excellent article.

Bread should never be used until 3 or 4 days after it is baked. The common water crackers, is a good preparation of this kinde Brown bread is gently stimulating, and is therefore good for some dyspeptics. Cheese, cream, & butter should be sparingly if at all

used. Of vegetables potatoes are the best, they should be dry & mealy & roasted in hot embers, ripe apples may be used in moderation, but cucumber, celery, peas, beans, cabbage, melons, pears gooseberry, currants, parsnips & everything of the kinds must be religiously avoided, the should have mentioned whilst speaking of the different preparation of flour, that all kinds of pastry must be avoided. The same may be said of all kinds of sweetments

Spirits in general are not ~~generally~~ admissible in dyspepsia, but sometimes a little brandy & water, or wate & wine may be used. The food of dyspeptic should generally be taken in a solid form, broths & soups must be avoided. The patient should use no more water, than he can help. Exercise by walking or riding on horseback is also useful. Walking & riding act by succussion on the the stomach & produces a tonic effect The salutary influence of exercise change of air scenery &c can be consulted at our leisure, in the work of Dr James Johnson ~~on~~ "change of air & the philosophy of travelling"

But we must now turn our attention to a variety of dyspepsia that requires a more complicated treatment. Here we have sub-inflammation, or at least a highly irritable condition of the mucous membrane of the stomach. In this variety of the disease, nothing but farinaceous articles of food can be used. Solid animal food is here out of the question & can only be used occasionally in the form of broths & soups But as the treatment of this variety of dyspepsia, requires medicinal agents, we will more particularly refer to it under the head of medical treatment.

Medicinal Treatment. We have already said in speaking of dyspepsia, from debility that laxatives & tonics are sometimes necessary. The bowels are generally torpid & as much depends upon a regular evacuation of the contents of the bowels, aperients are often necessary. It is however always desirable to dispense as much as possible with medicine in this variety of dyspepsia & hence if we can produce the regular motion of the bowels by diet, exercise &c it should always be done. A regular attention to the pro de Chaise, at stated intervals,

will greatly promote regular evacuations. When medicine is no longer to be dispensed with, he should use the most gentle kinds. Rhei is a good article for this purpose. Dr. Eberle speaks highly of the "following" to be taken a short time before the principle meal; when there is much acidity in the stomach, the rhei may be advantageously given in combination with from 10 to 20 grains of the Dark of Soda, or 30 or 40 gr. of magnesia. "No remedy however" he continues "has appeared to me to act more favorably, as an aperient in the milder genus of dyspepsia, than small doses of ipecac in union with aloes & extract of hyoscyamus." From personal experience I have known that in some instances at least, the effects of this combination, to be particularly useful, and soothing as an aperient." When after the above treatment the symptoms of dyspepsia are relieved, & the patient is in a feeble condition, which is sometimes the case, a recourse to gentle tonic may be had. of these most approved are preparations of iron, infusions of Colombo,

+ ℞ - Sodæ ossis grij
ana aloes gr p
ipecac gr 1 to be made into a pill

℞ Galbani Succ ʒj
Spermat ʒß
Extract Hyoscyam ʒj divide in 20 pills take one at night.

& gentian, to which may be added the alkalies. Experience appears to be decided against the use of emetics in dyspepsia, & especially antimony. Prof Dunglison, however thinks that an emetic of ipecac, will sometimes do good, by relieving the stomach of vitiated secretion, when any is present. & we see no reason why they should not be given in such cases.

Some dyspeptics have been benefitted by mineral waters, & we have every reason to expect. from the slight tonic properties, of calybeate waters, & the gentle exercise of mind & body, which such places of resort are calculate to favour will be of service to dyspeptic persons. Some dyspeptics with weak stomachs, have been benefitted by taking 3 or 4 spoonfuls of white mustard seed in the course of a day. When the liver becomes implicated, which is always the case, when the disease is of long standing, recourse must be had to mercurial preparations. The blue pill is perhaps the best. We may begin with alterative doses of this medicine, 5 or 6 grains may be taken every 2d or 3d night according to circumstances, followed by a gentle laxative draft in the mornings.

If the blue mass irritates the stomach it must be discontinued. In cases of this kind Dr Eberle recommends, "the internal use of the nitric acid diluted in large quantities of water, or what has appeared to him the more advantageous, the nitro-hydrochloric acid bath used according to Dr Irwin's direction", which is in the following manner; "Into a glass capable of holding a pint or more of fluid, put water ℥viij & then pour in ℥iv of nitric acid, & the same quantity of the hydrochloric acid. One ounce of this mixture to a gallon of water will form a mixture of medium strength. The feet & legs of the patient are to be immersed in this bath, at a temperature of about 96°, & left there 20 minutes or half an hour, just before going to bed. This should be done every night & the same bath will remain good for 5 or 6 nights." The alkalies are common remedies for acidity of the stomach, which ~~such~~ is a frequent condition of dyspepsia. Opium should never be used in dyspepsia if it can be avoided. But there are sometimes such

violent paroxysms of pain, that nothing but opium, will relieve, the Dovers powders will sometimes be sufficient, there are cases that nothing but large opium given without regard to quantity will relieve.

When indigestion not connected with inflammation is attended with a morbid sensibility of the stomach, with pains soon after eating, when the tongue is covered with a white coat & pale or red around the edges, small & quick pulse, the temperature of the skin reduced. And when the stomach though not tender to pressure gives a feeling of emptiness, & is attended with pain 4 or 5 hours after eating, we have much reason to think that the gastric nerves are in a highly sensitive condition. In such cases we can employ the Dovers in connection with 4 or 5 grains of Carb. of ammonia with considerable advantage. Dr Philip considers the ammonia invaluable in cases of this kind, attended with a feeble pulse & general depression, it being less apt than any other stimulus of the same power, with respect to the

nerves, to excite the heart, & blood vessels, which from the tendency of the disease in this (the second) stage are inclined to a degree of excitement beyond, a due proportion, to the state of the other powers

When in addition to the above symptoms we have much gastric derangement viz irritation with slight febrile symptoms towards evening, such as dryness of the skin when at the same time it is hot, burning in the palms of the hands, & soles of the feet, tension of pulse, the nitrate of potash will generally afford much relief. It may be advantageously given with minute portions of the tincture of ipecacuanha, dissolved in some mucilaginous fluid. About 5 to 10 grains of the nitre, dissolved in a few ounces of barley water, or a solution of gum arabic with ℳxxxxx of tinc ipecac may be given every four hours" Eberle

When the disease assumes the character described in a former part of this paper viz. in addition to the symptoms already mentioned we have dark-inflammation

in a chronic form, with the attending symptoms of a tense pulse, a tongue red at the edges & tip, epigastrium tender on pressure &c, we must lay aside our stimulating remedies, & proceed upon the antiphlogistic plan. For the purpose of relieving the pain that is felt in the region of the pylorus, the application of leeches & blisters will be required. "Blistering says Dr. Eberle will often be found particularly beneficial in cases attended only with high irritation, without actual inflammation". When ever local irritants are required we would always prefer the tartar emetic ointment

Purgatives are frequently required in such cases, & we should always use the most uninitating kind. Gentle emetics are sometimes more suitable than purgatives. In order to produce moisture & relaxation of the skin, nitre in diaphoretic doses may be used

We have already had occasion to remark, that where the liver is implicated we must use mercury. This treatment holds good as a general, But when this

condition of the liver is present, with high irritation or sub-inflammation of the mucous membrane of the stomach, we must exercise great caution in the use of mercury. The smallest dose is sometimes too irritating, & we are under the necessity of combining it with opium in order to obviate these unpleasant effects Dr. Eberle advises in cases of this kind "to give a grain of blue mass with a gr gravis of opium every night on going to bed, & care must be taken not to carry it to the extent, of causing even a soreness of the gums". It would be perhaps, useless to add, after this injunction against carrying mercury to the extent of producing sore gums, to say that ptyalism would be highly injurious. This is the conclusion of all authors on this subject & more especially those who have quite recently written on this disease.

Although in our remarks on the treatment of this disease, we have spoken of dietetics & remedial agents we do not thereby intend that they should be resorted to

under distinct heads, we do not thereby intender that should be separately resorted to. The dietetic rules must be just as strictly observed whilst the patient is under medical treatment as when he depends alone on it for relief.

It will generally be found, that where dyspepsia depends upon debility of the muscular coat of the stomach alone, that a rigid attention to diet will complete the cure, with occasional use of laxative medicine. This will more particularly be the case if the patient takes judicious exercise, both of body & mind & who guards himself against atmospherical changes &c. But when the disease thus assumes the character of the second variety viz Subacute inflammation, then it must be treated in the same manner that we would chronic gastritis, a disease so nearly allied to this variety of dyspepsia, that we know of no difference

between them more, than that of names.
Thus we have concluded our remarks on a disease of which we know little, or nothing at all from experience. We are however sadly informed, by a mere glance around us, of the extensive ravages it is making upon all classes & conditions of mankind. There is yet much to do & we trust efficient hand are engaged in the task — our means of defence, greatly need to be strengthened. For it still frequently happens, that when we have done all, that human skill has yet devised we are reduced to the painful necessity of seeing our patient passing on with rapid strides to inetrievable ruin. When our theories are of no avail, and when the exhibition of our remedies, prove nothing, but their inefficacy.

An

Inaugural Dissertation

on

Inflammation of the Entire Intestinal Mucous Membrane

Submitted to the Examination

of the

Provost Trustees and Professors in the

Medical Department

of the

University of Maryland

For the Degree of

Doctor of Medicine

by

Charles H. Orr

of the State of Maryland

Baltimore March 1834

An Inaugural Dissertation On Inflamation of the Gastro-Intestinal Mucous Membrane

Submitted to the Examination of the Provost, Trustees and Professors in the Medical Department of the University of Maryland For the Degree of Doctor of Medicine

by Charles H. Ohr of the State of Maryland

Baltimore March 1834.

To Dr G W Boerstler

Dear Sir

To you my preceptor and benefactor this, my first medical essay, is dedicated; as a tribute of respect to your professional endowments, and private character; and as an imperfect testimony of gratitude for the many favours received from you. With sincere wishes for your happiness and prosperity.

I remain your nephew

Charles H. Ohr

To

E. Geddings. M.D.

Prof. of Anatomy and Physiology

in the

University of Maryland,

This essay is respectfully inscribed

as an humble tribute of respect, for, the powers of his mind,

his social virtues, and

his exalted talents as a public teacher.

By the, Author.

Inflamations of the Gastro-Intestinal Mucous Membrane.

When we take into consideration the relation which the stomach bears to the animal organism a feeling of surprise is excited that so little should have been known relative to, or so little attention been paid to the diseases of this organ. That the stomach; a thin, delicate, membranous viscus, upon which depends the nutrition and continuation of the human frame, subject to the appetites and inclinations of man, the vicissitudes of aliment and climate, and the sympathies of the organs with which it is surrounded and connected, and which are dependent on it; that the diseases of an organ thus situated and related should be so few, or so trivial as to escape observation for ages is "passing strange". Was the stomach, formerly, different in its organization? Were its functions different was it not subject to the same vicissitudes of climate and appetites? Were its disorders too asthenic to come within the sthenic precincts of Dr. Browns accumulated excitement and excitability? Or merged beneath the bilious floods of the humoral pathology?

Inflamations of the gastro-intestinal mucous membrane are not so rare or trivial as to escape the eye of scrutiny, but "If we take into consideration the number and variety of foreign bodies of a more or less stimulat-

-ing character that are incessantly applied to this membrane; it will appear strange that it does not still oftener experience the phenomena of inflamation. Those of the Bronchia and organs of generation are still more exposed to them. We constantly see a host of individuals who pass their lives in harassing the stomach with every incendiary article producede by the two kingdoms of animated nature and our books of Pathology speak to us only of gastric embarassment, of bilious or mucous saburrae. Among the older writers, inflamation of the lining membrane of the stomach was totally unknown, unless some of the corrosive poisons were the causative agents. In the days of Galen the fluids were the sole seat of all diseases. Paracelsus in the sixteenth century established the Chemical pathology and with him all the derangements of the system were owing to some acridness of the humours. The medico-organic Stahl, although guided and directed by the soul, assisted and protected by the vis medicatrix naturae, was affected by the fluids; all diseases being either attributable to plethora or cachexy. Hoffman altho the first to pay particular respect to the solids in his medico-mechanical doctrine of spasm and simple atony could not divest his mind of the vitiosum humorum derived from his humoral predecessors and hence the disturbance of the solids and fluids were with him the reigning

diseases. Boerhaave again fell into the darkness of the humourists in consequence of the lentor, acrimony or alkalescency of the fluids and thus lost sight of the track to the true nature and seat of disease, the first dawnings of which were thrown out by the mechanical Hoffman for untill the fluid notions were merged in a due degree with the solids, medicine was a science without principles, or no science, but an art, and the human body a species of laboratory composed of substances which might be decomposed and recomposed or formed into new and more healthy compounds as suited the imagination of the chemist. Consequently so long as no attention was paid to the solids, and their Physiological functions were not known or thought of; their Pathological or diseased conditions could form no part in the catalogue of disease. And from the days of Hippocrates to the time of Cullen; a period of more than two thousand years, all diseases were attributed to some fault in the humours; and the attention of the medical world was never directed, but once, to the solids; which, like the faint glimmering of some distant star, which, twinkles for a time is perhaps unobserved but by a few when its transitory gleam is hurried into obscurity by the bright effulgence of some more brilliant and magnificent luminary. Such was destined to be the fate for a time of the short lived and imperfect glimpse of

the solids which broke in upon the mind of Hoffman. To Hoffman it is true, the solids did appear to be the seat of disease but even then it only extended to the nervous system, that he attributed pathological conditions combined with and almost buried in deviations of the humours from their Physiological state. Thus then stood the science of medicine, variable as the minds of the men, who, alternately directed it; sometimes under the control of mechanical laws, these again subverted by the chemical principles of the arrogant and bombastic Paracelsus Theophrastus, these in the revolution of human affairs displaced by the medecina expectante of Stahl the founder of of the vis medicatrix naturae, who, notwithstanding the soul was the vis conservatrix located the diseases as his predecessors had done in the fluids; this theory was destined to "strut upon the stage" and sink beneath the more rational viens of Hoffman. To Cullen, was allotted the task, of fixing more firmly the leading principles which had been proposed by the primary professor of Halle, and directing due attetion to the location of disease in the different parts of the body. The pathological conditions of the alimentary mucous membrane were very imperfectly known to him. And the unfortunate Brown only knew them as produced by corroding poisons. To the labours of the immortalised Bichat the science of medicine is indebted for the proud

eminence it holds as founded on fixed principles derived from the comparison of Pathological conditions with Physiological acts of the different tissues constituting the human organism. Many and great are the improvements which have been added to science since his day; great and rapid are the strides, our science has made in its march towards perfection. Many are the names enrolled on the pages of fame as persons who have largely contributed to the honour and advancement of the science. But to Broussais the world owes a greater amount of gratitude than any other man of the present day for the improvements effected and to be accomplished by his instrumentality. Of his theory of or the reasons given by him to substantiate it I am not sufficiently acquainted to give an opinion and although it may be "destined to culminate for a while in the firmament of our science and to attract its host of worshippers but to sink again sooner or later and add another to the long list of once highly favoured but now exploded and neglected doctrines"; nevertheless this much is certain, that his name is not "destined to culminate for a while" and sink into the forgotten depths of dark oblivion; but when history shall be called upon for the brightest ornament that adorns the register of fame she will unroll the record of eighteen hundred and thirty years and print to the name of F. J. V. Broussais.

Although the "Physiological doctrine" may by some of the transcendent, would be luminaries of the present day, be looked upon as the "Greatest of all absurdities" and considered far beneath the foleries of "Animal magnetism" yet some men, who are held in high repute by the more intelligent part of the profession, are disposed to look upon it with a friendly eye; and it is perhaps quite as satisfactory and as well sustained by facts as any other of the present day. And if it is not capable of bearing the test of time and scrutiny of reason, its founder can enjoy the satisfactory pleasure to be derived from the consciousness of having done as much, at least, as any of his cotemporaries, to the advancement of his profession and the alleviation of human sufferings. Broussais' theory deserves the honour for having first given the medical world some idea of the existence and frequency of mucous gastro-enteritis independent of poisoning; for none of the writers on physic, who, preceded him speak of it but as a variety of disease produced by corrosive substances taken into the stomach. But Broussais and other French pathologists who have paid particular attention to this subject inform us that it is not so rare, or like "angels visits". If his theory of the nature of fever with the autopsies, brought forward, to sustain viens, have been productive of no

* a decent respect for the opinions of mankind —

other good, they have taught us to reflect and consider, and convince us that the liver is not the seat of quite as many and the stomach more of the diseases which afflict our race, than we were heretofore in the habit of believing. We are now taught to look at the organic arrangement, the degree of vital sensibility, and relative importance of function with which, the different organs, constituting the human economy, are endowed; the degree of exposure and susceptibility to the action of morbific agents which exercise a lethiferous influence on them, to contrast the degree of connection between them and the general system; the degree of influence exercised on the harmony and welfare of the organism by the healthy performance of their functions, and judge of the nature of their diseased conditions in accordance with these viens. In consequence of these circumstances our nosological arrangements contain a distinct class of diseases located in the gastro-intestinal mucous membrane, the first which we propose to treat of, under the apellation of, Acute Gastritis.

Before we engage in the details of this disease it may be proper to take a brief view of the Physiology of the stomach, its organisation and function. The Stomach is a hollow, membanous, organ, occupying the superior portion of the abdomen; it may with propriety be considered as a dilatation

of the alimentary tube. It is composed of three tunics the one superposed on the other, the external is formed by the reduplication of a portion of the peritoneum; the next immediately beneath is styled the muscular tunic, consisting of a sparse arrangement of circular and transverse bands of muscular fibres; this is lined internally by the mucous coat this mucous membrane differs somewhat in its structure and offices from other mucous membranes, having incorporated with it numerous follicles or crypts and glands whose office it is to secrete a peculiar fluid which is said to have acid properties. there is also another fluid secreted from the general surface of the membrane these combined are said to form the gastric juice. It is also to be considered as an absorbing surface (Abercrombie). The proper office of the stomach is to form chyme of the food, which is taken in, by the action of the juices and motions of the stomch; prior to another step which is called chylification or proper assimilation which is completed in the duodenum. The chief diseases of this membrane are inflamation and its consequences. From the functions and relations of this mucous membrane we should, I think, be naturally led to infer that it was extremely liable to inflamatory affections; but nature ever provident of her works has endowed it with peculiar powers and energies well calculated to sustain it in

in the performance of its important functions and enable it to resist the incendiary attacks of external irritants.

Causes. Acute inflamation of the gastric mucos membrane may be produced in consequence of the introduction of corrosive poisons and acid into the stomach; copious draughts of cold water rapidly swallowed when the body is much heated and in a state of free perspiration from too great a degree of corporeal exertion. Over distention of the stomach by stimulating food, indigestible substances of both kingdoms of animated nature acrid vegetable and animal substances frequently give rise to this disease, some species of fish give rise to the most alarming symptoms of gastritis. Stimulating drinks external applications of cold especially when the body is much heated; "the suppression of habitual sanguineous discharges" (Clark) the sudden suppression of the discharges from ulcers sometimes produce this disease. "Metastasis of gout and rheumatism" translation from the other mucous surfaces sometimes takes place giving rise to gastritis. Blows or falls on the epigastrium and wounds penetrating the cavity of the stomach produce gastric inflamation. "Besides" says Dr Clark "the foregoing manifest causes of acute gastritis, there are others of an occult character which appear to produce

a specific tendency to excite inflamation of the stomach. Of these the "miasm" which produces yellow fever is the most remarkable. Acute gastritis frequently occurs in the other forms of malignant fever especially the putrid typhus of warm climates." We feel inclined to extend the "occult" cause of the D somewhat further; the "miasm" which produces the malignant Cholera which has so lately and signally visited our country does manifestly exert a "specific" influence on the gastro-intestinal mucous membrane, the miasm which produces small pox appears to exert a "specific" influence, which is "manifest", on the gastro-intestinal mucous membrane, this effect is palpable during the existence of the disease. We will go further still and say that the "miasm" which produces Bilious fever exerts a "specific" influence on the gastric mucous membrane, which is frequently "manifest" during life though sometimes it is very "occult" untill developed "manifestly" by a drastic cathartic or two. The D places Bilious fever under the class of general irritative diseases of the blood vessels independent of local inflamation; Gastritis under the class of general irritative diseases of the blood vessels connected with or dependent on local inflamation. Although thus classed the Dr. gives to both "a local habitation and name" one in the

gastric mucous membrane the other in the liver and classed as "General and independent of local inflamation". Having no faith in the doctrine of Idiopathic fever we are disposed to give all fevers a local habitation, although, this local disease is not necessarily a high and "manifest" degree of acute inflamation and this morbid condition is not necessarily located in the gastro intestinal mucous membrane and seldom or never in the cappilaries of the blood vessels where it is located by Dr Cole although he calls it a general disease having no local habitation. We are inclined to believe with Broussais that "Every local exaltation of organic actions sufficient to disturb the harmony of the functions and disorganise the tissue in which it is seated, ought to be considered as an inflammation". We do look upon this as an axiom or self evident truth. The morbid condition of the cappilaries, or liver, or both, for we are somewhat at a loss which, the Dr considers as the seat of Bilious fever, in the generality of cases, if left to itself, would eventually disorganise the affected tissue; it is a morbid condition not merely "increased or decreased action" and consequently and "irritation" or sub degree of acute inflammation. "This irritated excitement may be the result of morbific causes acting directly on the internal surface of the sanguiferous system".

Says Dr Clark in his third proposition on the nature of Idiopathic fever. How does "miasm" act directly on the internal surface of the capillaries? On this part of the subject the Dr. leaves us in the dark, it may get there as it can, it is merely necessary that it should get there and make a "local" impression to develop a disease which is "not local"; "or" the Dr says "of irritating impressions conveyed sympathetically to this system from a primary focus of irritation". Truly a logical beginning for an Idiopathic fever having no "local" habitation, but "a primary focus of irritation". "4. The first link in the chain of morbid actions which occur in the development of fever always commences in the nerves". The first link in the chain of morbid actions, is the impression of the morbific cause, which is on the nerves "always"; and this is the manner in which the cause of fever comes directly on the internal surface of the capillaries, not secondarily but directly all ways. Consistency, thou art a jewel! Fever, Idiopathic not owing to "local inflammation", arising from a "local exaltation of organic actions sufficient to disturb the harmony of the functions" of the capillaries acting "directly on their internal surface", "always through the medium of the nerves", or "sympathetically to this system, from a primary source of irritation". Where is this "primary source of irritation" this

"fons et origo" of all this disturbance. From the names Bilious, intermitting and remitting fever, we are led to the conclusion that it must be in the Bile or its vicinty. This bilienous compound of yellow or "atrabilis" is the grand scource of a sufficient number of diseases to entitle it to excommunication from books of Physic.

5. "The general, remote, and exciting cause of fever rarely produce local inflammation anterior to the development of general febrile reaction". From this proposition of the Dr we infer that the causative agent, which gives rise to the pathological phenomenon called fever does sometimes produce inflamation, manifest before "reaction", and also that fever is a recuperative action set up by the organism to restat the morbific influence and restore the functions of the organ or organs constituting the "primary focus of irritation". We further infer, that when inflammation is not fully developed before "febrile reaction", that a sufficient degree of irritation is existing to produce a degree of functional disturbance, "locally", sufficient to produce a state of "irritated excitement" of the cappilary sanguiferous

system constituting "general febrile reaction" prior to local inflamation which will be developed if proper means be not adopted to prevent this result. If we view the nerves as the instruments constituted for the conveyance of impressions or sensations and fever as dependent on "local exaltation of organic actions sufficient to disturb the harmony of the functions" of the parts impaired and not as general or idiopathic fever dependent on no local disturbance; and the "irritated excitement" of the capillaries or "febrile reaction" as a phenomenon of the disease and not as the disease itself we may approach as near to a knowledge of the nature of fever with as little inconsistency and as much probability and plausibility as Dr Eberle. We are inclined to think that miasm makes its impression on the system principally in the mode referred to by Dr Eberle in his practice vol 1. page 17. that is; transudation through the pulmonary mucous membrane into the circulating system, having a tendency like other substances admitted into the blood, to act on some particular part of the organism either in consequence of affinity, predeliction, or predisposition

from the action of previous causes, giving rise to local derangement of function or inflammation followed by febile reaction constituting general fever; and thus fever may be developed by irritation or inflammation of the gastro intestinal mucous membrane. Debauches, surfeits and vicissitudes of heat and cold not unfrequently produce gastritis. Drastic cathartics and other irritating drugs not unfrequently give rise to acute inflammation of the gastro intestinal mucous membrane in particular conditions of the system.

Symptoms. Acute Gastritis frequently commences with a feeling of uneasiness or pain in the epigastrium general langour or "mal aise" with loss of appetite or loathing of food, sometimes with violent vomiting and purging with a burning or lancinating pain in the stomach, sometimes the patient complains of a gnaning pain with aversion to food and desire for cold or acid drinks. In some instances a prickling pain and soreness in the pharynx without much gastric irritability are the first symptoms of the disease" "and occasionally it begins with great tenderness of the epigastrium, nausea, retching, and vomiting. The pain

or uneasiness in the epigastrium is aggravated by pressure, warm drinks always give rise to increase of pain and vomiting which relieves the pain after ejecting the contents of the stomach. The patient is generally averse to the use of warm drinks. "In some instances there is considerable difficulty of swallowing on account of the contracted and irritable state of the upper orifice of the stomach." This probably arises from the inflammation of the cardiac orifice reflecting its sensations to the oesophagus higher up giving rise to spasmodic contractions of the muscular tunics for it frequently happens that substances attempted to be introduced into the stomach by the mouth are returned rapidly through the nose before they could have reached the stomach. "Oppressed and anxious respiration occurs in many instances from "the inflamed state of the stomach rendering the descent of the diaphragm painful." A deep inspiration produces increase of pain which when attended by cough as it sometimes is may lead the practitioner into the beleif that he has to deal with a pulmonary affection. The respiration under these circumstances is generally costal or performed by the ribs the abdominal parieties being almost always

stationary, rigid, and contracted upon the organs contained within. The brain sympathises strongly with the inflamed stomach; symptoms indicating this state of things if not always present are so in a great majority of the cases of acute mucous gastritis, such as headache, pain across the forehead or a sense of constriction, the eyes more or less injected acutely sensible to the impingement of light stupor or coma, disturbance of the mental faculties, sometimes amounting to complete delirium. "Broussais has seen them as delirious as in fevers of the most malignant character, or phrenitis." "The delirium" says Eberle "in such instances is almost always greatly subdued for a short time by a draught of cold water." This will not hold good in many instances, especially when the degree of delirium is high or more than simple incoherence of ideas. The patient is sometimes, when the symptoms are indicative of intense inflammation of the stomach, in a state of complete, stupefaction or profound lethargy, almost totally insensible to any or every impression made on the external senses, and roused but with great difficulty for a moment sinking instantly into profound oblivion. "Acute gastritis is generally attended with great

depression of spirits and prostration of strength, and the pulse, though at first moderately full, soon becomes very contracted, quick and tense and at last so small as scarcely to be felt. Sometimes completely absent at the wrist. "The aspect of the countenance is expressive of great anxiety and suffering, or of despondency and despair." The features are frequently shrunken and sharp presenting as the disease advances a Hippocratic countenance, the forehead and eyebrows are wrinkled and contracted the expression of the features is inquisitive and anxious. "When the inflamation is confined to the stomach the bowels are constipated." The skin is dry and generally hot. The tongue sometimes has a yellowish brown and white fur with red edges, generally quite dry. When the inflammation is very intense the tongue is almost entirely red and dry the secretions of the mouth are depraved or wanting. "The urine is small in quantity and red; the extremities of the mucous membranes are red; the conjunctiva injected the pituitary membrane dry." (Martinet) "The tongue is covered by a thick adherent coat which becomes dry and rough as the inflamation advances." When the disease has made consid-

rable progress "The tongue, gums, lips and teeth are encrusted with a brownish black matter." Toward the conclusion of fatal cases, hiccough, fainting, cold extremities, slight delirium, coma, and cold clammy sweats occur. (Eberle)

These phenomena are not always unequivocally manifested in acute inflamation of the stomach. The disease makes rapid, but insidious strides to a fatal termination, or is too far advanced in its destructive course before the practitioners attention is directed to it, scarcely any symptoms being present which indicate the existence of inflamation in this organ; or simulating the diseases of other and remote organs so perfectly as to engross the attention of the practitioner entirely to the organ thus sympathetically affected. Sometimes the brain presents such unequivocal symptoms so palpably as to induce the beleif that the disease is confined entirely to it, and the true nature of the disease is unfortunately discovered, too late to be controlled by the attendent, and perhaps in consequence of his remedial agents. Thus unfortunately for mankind and our profession, the very remedies which we employ for the eradication of disease and the relief of suffering are made to recoil on us with redoubled

energy and hasten the fatal event which launches the unfortunate sufferer into the "silent and fearless tomb". The agents, employed by our hands to assist the efforts of nature, treacherously ignite the latent, lurking, spark, overpowering the energies of nature destroying what they were intended to redeem. Or the symptoms may be so trivial and slight as to lull the mind into the fatal belief that nothing is to be apprehended while at the same time the frail bark of vitality is tossing among the quicksands of disorganization or hovering on the frightful verge of the precipice from which we are inevitably plunged into irredeemable destruction.

Diagnosis. This disease may be confounded with spasm or flatulent pains. In gastritis the pulse is small quick and tense; in spasm, or flatulent pains it is full or nearly natural. Gastritis may further be distinguished from these by nausea and vomiting which is increased by warm drinks, neither of which are very liable to occur in spasm. In spasm the pain frequently intermits for several minutes, rarely in gastritis and the pain is less acute and is increased by pressure; in flatulent pains it is not aggravated but frequently relieved by pressure as

also in spasm. In gastritis the patient is averse to motion, and lies on his back; in cramp he sits up or walks about with the body bent forward or tosses about in bed; in cramp the pain is heavy twisting aching and extremely severe; in gastritis the pain is burning and lancinating the skin is hot and dry; in spasm it is rather cool and usually moist. The head is not so liable to be disturbed in spasm and flatulent pains as in gastritis and the tongue does not present the appearances which characterise gastritis. From peritonitis it may be distinguished by the manner of invasion; the pain in peritonitis commencing at the umbilicus and extending over the whole abdomen, becoming more acute by a slighter degree of pressure; pain in the back, elevation of the knees and shoulders, moist tongue covered by a white fur and frequent pulse may serve as distinctive marks of peritonitis.

Prognosis. A gradual subsidence of pain and disposition to vomit, accompanied with a lateritious sediment ~~of~~ in the urine, spontaneous feculent alvine discharges, a gentle moisture of the skin and a more developed compressible pulse indicate a favourable termination. When on the contrary the pain and vomiting continue with unabated violence for several days with difficulty of respiration and hiccough

the pulse becoming smaller more frequent and corded" or imperceptible "the worst consequences are to be dreaded". If after the symptoms have continued in this progressive course of aggravation the pain suddenly subsides and the extremities become cold and clammy with dimness of sight and slight delirium a fatal termination is inevitable. (Cheele) When the brain becomes deeply implicated soon after the commencement of the disease and continues so for a length of time it is indicative of great danger, and if symptoms indicating effusion on the brain, supervene a fatal termination is to be expected.

Post mortem appearances. "The external membrane of the stomach is usually natural, sometimes this viscus is distended with air, but occasionally it is contracted. The mucous membrane of the stomach is sometimes studded with red dots, or covered by patches arising from the effusion of blood into the substance of the membrane itself; at other times a uniform redness is diffused over the whole extent of the membrane being particularly conspicuous, and of a deeper shade around the cardia and pylorus. Occasionally the redness follows the course of the bloodvessels which are injected and arborescent; this colour is of a vivid red or of a darker shade almost brown;

both shades are alternately mixed or intimately blended one with the other. In some cases an effusion of gas takes place beneath the mucous membrane. Gangrene is rarely met with; ulceration is also unusual and seldom penetrates as far as the muscular coat. When the mucous follicles are affected they resemble small reddish pimples. (Alison) The follicles may also be elevated in clusters, indurated ulcerated or softened into pus. The mucous membrane may also be indurated or in state of "rammollissment" in patches. "In some instances of great violence the disease proves fatal before gangrene or disorganization has taken place in the inflamed mucous membrane" This effect has been attributed by Broussais to the intensity of the pain producing death before visible lacsion supervened. (Elliot)

Treatment. The treatment of this disease has been the theme of much discussion without much advantage resulting to either party; they have merely convinced each other that they would follow their own inclinations, without convincing each other of the propriety or impropriety of their respective modes of treatment. To the common observer this would seem to be an unnecessary waste of words and arguments;

however it doth appear that great men must cavil that they may astonish others by the force of their logic and the profundity of their learning. This disease should be treated like all others according to the indications manifested by the symptoms which the disease may present at the when we propose to treat it and not according to the name which the disease may bear, or with certain agents because they are recommended by particular authors in the disease bearing the same name which we employ on accent of the symptoms. In this consists the source of error which gives rise to these unnecessary and unprofitable discussions. Our great object in all cases, and which should never be lost sight of, should be to find out the organ or organs affected, what tissue of the organ is the seat of the disease, the nature and extent or quantity of disease, the degree of functional leasion, the relative importance of the normal performance of the function, the extent of derangement which the nonperformance of this function may produce in other functions or in all the functional acts of the economy, the liability of other organs to partake of this diseased action sympathetically or otherwise, and the probable result of

this abnormal condition; and from these draw our indications select such means as are best calculated to fulfill these indications and apply our remedies accordingly. After this has been accomplished we may, if we think proper, give the disease a name. Accordingly in inflammation of the gastric mucous membrane our indications are to subdue the inflammatory excitement and to relieve the pain, restore the secretions and establish the healthy performance of its functions. The first of these indications consists in restoring the natural action of the heart and arteries relieving the cappillaries of the part and quieting the stomach. The second embraces not only the secretions of the mucous membrane of the stomach, but of the whole tegumentary system and all the secretory and excretory organs. These indications are to be fulfilled, by the employment of general and local agents both external and internal; the most important of all is vene section.

From foregoing parts of this essay it might be, inferred that we had adopted the principles of the "Physiological Doctrine", and, consequently, as some contend, we

should not employ, any other remedies than those there recommended, or those which are considered as injurious or not to be relied on. We must say that we have not adopted the principles of that doctrine because we are not sufficiently acquainted with them either to claim or disclaim them consequently we are not bound to adhere to, or adopt the mode of treatment, contained in it, in order to preserve our consistency. And although we are disposed to attribute much to the agency of "gastro enteritis" we do so only so far as we think facts together with common ~~observation~~ and experience will sustain us in our position. We do contend that gastro-enteritis does prevail to a much greater extent than has heretofore been admitted, and if inflammation or irritation of the gastro intestinal mucous membrane be not the cause, as contended by Broussais, of what are denominated idiopathic or essential fevers they are nevertheless present in a great majority of fevers and should modify, or guide the remedies to be employed in the treatment of the disease. Although we may, to a certain extent adopt the pathological principles of certain individuals we do conceive that we are not bound in any manner to

employ the remedies reccommended by them unless we have something more satisfactory than the mere ipse dixit of the reccommender to convince us of their propriety; we are not bound to look at things with their eyes or to view the modus operandi of those remedies in the same light that others do. they should be sustained by facts, reason and analogy singly or combined before there can be any shadow of obligation resting upon us. If we were compelled to adopt implicitly the ideas of things that were entertained by our predecessors what would be the present condition of the medical science? Surely not what it is, but buried in all the irrationality and incongruity of the humoral pathology; the fair fabric of our science would yet be a shapeless and deformed mass of unintelligible jargon and superstition. The practitioner of the science would be a mere automaton performing his duties as mechanically and monotonously as a clock performs its diurnal revolutions. The science would be tasteless and insipid presenting, like a barren heath, nothing to regale the mind or eye but one boundless expanse of monotony and chaos. We do conceive that every medical man, who feels an interest in the welfare of human-

ity, should read, observe, examine, reason, and judge for himself he should study and watch, coolly and calmly, but, with deep interest the characters and changes of disease and the action of remedies on the various pathological conditions of the different tissues composing the animal organisms. Without this science to interest our feelings in every new scene of affliction our profession would be coldly practiced; without this study of causes and a continual ambition to come to every new consultation with new acquirements of knowledge, new precedents, and more decisive facts professional men would languish in the pursuit of science, without this philosophical view of the parts and functions of the living body, practice is not experience and gray hairs and length of years bespeak only stubborness in prejudice and ill founded claims of deference and respect. Experience is observation founded on previous knowledge. He, will have little sympathy with the pains or sufferings of his patients, who does not reason on what is going on within the body; who does not watch incessantly the symptoms indicating change whether towards health or disease and feel more anxieties and fears than

his patient can imagine and see dangers of which his friends can not be conscious. Such reasoning repeated from day to day is truly experience." (J. Bell) And yet how many are there who would fain stand at the head of their profession and who consider themselves as the pillars of the science who quote on all occasions their experience and their having grown grey in their profession, who so totally ignorant of the laws and functions of the economy and reckless and unmindful of the consequences persue the simple but uncertain, illiteral and unsteady track of their experience employing indiscriminately, bleeding, puking, and purging, the action of which is as unintelligible to them as are the operations of the mind or the laws which controul the harmonious actions of the universe, and who as unqualifiedly as ignorantly condemn without hesitation the "new fangled visions of the closet" which they have never seen or read and the existence of which is known to them only by report. This is no fanciful sketch of the mind, but lamentably for mankind a fact of common and daily observation. Entertaining these viens as correct we say it is the duty of every man to examine fully and attentively and judge for himself;

and as for us we shall take the liberty to adopt such parts as to us appear sound and philosophical and discard that which we do not believe we will take as much of the pathology and indications of cure from authors as is sound and true but will claim the priviledge of using such remedies as to us appear to be best adapted to fulfill the indications of the case.

We have placed as the first and most important of all our remedies general bloodletting. Acute gastritis is as truly inflammatory and as imperiously requires the use of the lancet as Phrenitis, Pleuritis, Trachitis, or any other "itis" and cannot be coaxed by "leeches and gum water" to relinquish the hold it has taken on this organ and much less is it to be purged out by violent cathartics or emetics. But although the pulse is depressed, small it has tension, use the lancet and in proportion as you relieve the heart and arteries the pulse becomes fuller and more developed. In the onset of the disease a small depressed pulse should never induce the practitioner to forego the use of general bloodletting but so long as the pulse is small and tense and the patient has much pain with vomiting or irritability of the stomach he should be bled and if the blood present a buffy

appearance indicative of high inflammatory excitement it should be repeated according to the effects which it produces. A decided impression should be made at the first bleeding by placing the patient in an erect posture in bed and allowing the blood to flow untill syncope is produced or a state nearly approaching to it. This will generally produce a remission of the symptoms for a time; but in the course of a few hours an exacerbation will take place when the lancet should again be employed to the same extent as at first. The employment of venesection must not stop here, unless the patient be cured or very greatly relieved, but repeated as often as the nature of the symptoms may require and always in such a manner as to make a decided impression on the system. We must in the treatment of this disease use the most decided prompt and energetic plan of procedure, tampering will insure us nothing but defeat. and to our patient death. No other organ is more important to the organism in a functional point of view or is possessed of a greater extent of sympathetic influence. And consequently it is of the utmost importance that it should be speedily relieved.

Abstraction of blood locally by means of Cups or Leeches is of great importance and should be resorted to soon after the first blood-letting and in conjunction with it. Cups applied to the epigastric region act powerfully as adjuvants to the lancet and exercise a great revulsive influence and according to the principle of "ubi irritatio, ibi fluxus" excite a determination to the skin from the inflamed mucous membrane. Leeches also are very usefull but they act less powerfully as revellants; they can be applied with more ease to the patient, than a second cupping, the blood generally continues to flow for sometime after ~~the~~ the leeches have been removed, this may be continued for a considerable period after by the application of a large, warm poultice or warm fomentations, and thus the flow to the skin will have a tendency, by deriving from the internal membrane to allow the diseased cappillaries to empty themselves more effectually the flow and "vis a tergo" having been lessened and to assume their natural or healthy calibre in consequence of their organic contractility. Sinapisms also are productive of some good as revulsives in consequence of their rubefacient action;

It has been thought that much of the beneficial action of blisters and sinapisms is by their stimulating the cappillaries, which are in a pathological condition, to contract it is rather problematical whether they are possessed of any such effects. A Sinapism does not remain applied sufficiently long to permit this absorption to take place, a blister does remain long enough to permit this action but which does not take place, unless the cuticle be abraded and then in all probability it would only increase the irritation and mischeif, if a sufficient quantity of either substance were to enter the mass of blood, to excite or produce this contraction would it not necessarily excite the whole internal surface of the cappillary and general circulatory system? If these substances exert a local action from predeliction or affinity it certainly would not be manifested on the stomach but on the kidneys. We think they act on the same principle which we have attributed to leeches namely revulsion. If these substances stimulate the cappillaries which are in a phloyzed condition to contraction they should exert that influence on the cappillaries of the part to which they are applied and instead of rubefaction we should have

the part presenting a blanched appearance. It would be preferable to employ the cups and leeches before a sinapism or blister is employed. Blistering the epigastrium should not be resorted to untill the general inflammatory excitement has been reduced by previous evacuations lest by its stimulating properties it should increase the intensity of the disease. "The blistered surface should be dressed with with mercurial ointment. (Oberle) We may in some cases apply, with great advantage, other of our remedial agents, to the blistered surface which may by absorption be introduced when they cannot be retained by the stomach. The endermic mode of medication has not received sufficient attention generally, we are sometimes however compelled to resort to it in pathological conditions of this organ when accompanied with a great degree of irritability and vomiting, the simple mercurial ointment having the acetate or sulphate of morphine strewed over its surface will do much to the relief of this condition of affairs; various other substances as camphor, quinine, etc, may thus be introduced if the condition of the patient should require their employment. In those cases where

the brain is deeply implicated, there being preternatural determination of blood to the brain and the integuments of the cranium being increased considerably in temperature the application of cold to the head will be productive of much good such as cold water or pounded ice contained in bladders. Sinapisms or artificial heat should be applied to the extremities at the same time.

It is necessary to use great caution in the introduction of medicines or other substances into the pathologised stomach on account of its increased sensibility or irritability and its susceptibility from light causes to have is pathological condition aggravated. And it is a matter of primary importance to remove any irritating substances which may be contained in the stomach and intestinal canal as their presence cannot fail to aggravate the abnormal condition of these organs. Emetics are altogether inadmissible although they might seem to be indicated for the purpose of removing the contents of the stomach, yet of this be not effected by spontaneous emesis we must employ other remedies as it is advisable to keep the stomach in the most perfect state of quietness which is practicable. If our object can be ac-

complished without the use of warm water it should be avoided as the irritation which is requisite to produce vomiting together with the succussion given to all the abdominal organs produces an increased flow of blood to these parts. The smallest doses of tartrate of antimony increase the irritation and aggravate the sufferings of the patient and should therefore be avoided.

Purgatives of the more drastic kind should also be avoided for the same reason, the mildest kind of laxatives are the only ones which we may safely use in ordinary cases. The most appropriate of these is the Oleum ricini simply or in the form of confection with gum. Sweet oil has also been recommended. Magnesia is also useful in its calcined state or in the form of sulphate, the sulphate and calcinate may be combined with advantage as it is less liable to nauseate or produce emesis which the sulphate is very apt to do on account of its exceedingly disagreeable taste, it should therefore be very cautiously used or not employed if it can be avoided. If the stomach reject these we may with better prospects make use of the Seidlitz powders, employing at the same time as little water as will just hold them in solution. Ordinary Soda powders with the addition of sulphate of magnesia may

be employed with advantage as the taste will in a great measure be lost, by this mode of administration. Should all these different remedies be rejected by the stomach we must resort to the employment of Calomel if enemata fail to accomplish our object. Broussais considers this article as not only inadmissible but highly injurious considering it as a powerful imitant, this we think a lost fear of its producing violent irritation. But let us for a moment look at the catalogue of the materia medica, let us examine the various classes of agents analyse the action of the various articles and we will find that they are all imitants strictly speaking, morbid agents producing a peculiar irritation or a morbid action. All our remedies produce primarily a morbid action or one which does not exist in a normal condition of the functions of the organism they institute an action which is to all intents and purposes a morbid or irritated condition resulting in the restoration of the functions to their normal condition or in annihilation of these functions and destruction of the organs. An action which is incompatible whith a perfect state of healthy functional action. It may appear strange and inconsistent or impos-

sible that by creating a morbid action we should establish health but a careful analysis and observation of the action of our remedies on the tissues of the organism and a consideration of vital action connected therewith will convince us that strange as it may appear it is not the less true. As an illustration of this we may take an every day occurrence, the action of opium in irritations of the nervous system it suspends for a time the susceptibility of the nerves or blunts it to the action of the existing, by establishing a new irritation of more powerful action but ends in health. Medicines do not produce the same action at all times or the same effects on the organization the effects of opium in different instances is soothing, irritating, stimulating, and sedative and the same is true with regard to other remedies. Calomel undoubtedly does primarily act by producing a degree of irritation and when improperly administered may produce permanent mischeif. But if used with proper precautions it is one of the most important and useful remedies we can employ as for instance in cases where the irritability of the stomach is so great as to reject all fluid agents we are

compelled to resort to the use of this article, for under these circumstances it is the only article which will be retained. Its use however should be preceded by free bloodletting both general and local so as in a great measure to reduce the inflammatory excitement. Under these circumstances it will act more favourably and certainly as a cathartic and by the irritation which it may produce stimulate the vessels to contraction, to secretion and a more healthy action and thus instead of being an irritant its ultimate effect will be anodyne for it will quiet the stomach and alter the diseased action. In milder cases however or where the irritability is not so intense it should not be resorted to so soon, or untill the inflammation has be reduced by repeated bleedings but we can employ the Seidilitz or Soda powders as an effervescing draught with a view to its refrigerant and aperient effects; they will be found useful in many cases to quiet the irritability of the stomach and as the common drink as they are agreeable, refreshing aperient and less liable to excite nausea or vomiting, which it is important to avoid, and relieve greatly the distressing pain and uneasiness of stomach which harasses the patient.

When Calomel is given it should be in doses sufficiently large so as not to excite nausea and vomiting or to create as little sickness as possible. For this purpose ten or fifteen grains may be given and repeated as occasion may require. The ordinary diaphoretics as Nitrate of potassa and tartarized antimony are not applicable on account of the irritation which they are peculiarly liable to produce in this condition of the animal economy. Clearly as diaphoretics may seem to be indicated we are compelled, by the nature of diseased organ, to exclude from our curative means the agents which are ordinarily employed and to rely, for this action, on the lancet which is to us the pillar of hope. Opium is an agent highly reccommended in the management of Gastritis and has for its sanction the name of Armstrong and others. It is said to "excite a general and salutary action of the cutaneous exhalents" and if preceded by depletion to "assist the action of purgatives" and full doses of this article also produce "relief of the pain and reduction of the pulse". If it be employed it should be preceded by free depletion and given in combination with Ipecacuannah

and Calomel, as, Opium ij grs Ipecacuanah ij grs Calomel iij grs thrice per day; Armstrong is undoubtedly good authority and any thing which has the sanction of his name is entitled to respect, but highly as he speaks of the virtues of Opium in inflammatory affections of this kind it surely cannot be a crime to say that we have not great confidence in its sanative powers in this disease. Doubts arise and the mind is crossed by misgivings and lacks confidence, especially when this article, powerful and useful as it may be, shall to the exclusion of the lancet be employed for the cure of acute inflammations. To one, who is accustomed to see the lancet unsheathed in all inflammatory affections and observe the powerful influence which it exerts over them, the idea of burying them in the stupefying effects or smothering them beneath the sweet oblivion of Herculean doses of opium requires a stretch of confidence and faith which even so great a name as that of Armstrong may not be capable of inspiring. We can employ it as an adjuvant to the lancet but it is problematical whether we may employ it to the exclusion of the Lancet in the acute inflammation.

Ice in small quantities, dissolved in the mouth, as a refrig-

erant and to allay thirst and pain will be found useful especially when the stomach is very irritable. The drinks should be cool or cold and given in small quantities and may be frequently repeated. Cold mucilaginous infusions are very beneficial they are supposed to sheathe the surface with which they come in contact. How this does good is rather obscure but the beneficial operation of these substances is not the less certain and indisputable. The most appropriate of these are barley water infusion of Slippery elm bark solutions of gum arabic and water gruel; barley water or slippery elm is preferable and may constitute the drink and food to which the patient may be restricted. Vegetable sub acids may be mixed with water as it is rendered more agreeable to some persons of these the best are lemon or orange juice; the strong and mineral acids should not be employed as they are liable to increase the irritation. It is important to keep the stomach as quiet as possible and to exercise its functional acts as little as may be therefore no food should be allowed and the patient will seldom desire any and it should not be harassed with medicines.

Enemata of a laxative or cathartic character should be employed from the very commencement of the disease, and before any purgatives are administered by the mouth, for the purpose of evacuating the contents of the stomach and intestines and keeping them clear of any irritating matters that may accumulate in them and thus tend to aggravate the disease. If they perform this office effectually they will supercede the necessity of introducing cathartic medicines into the stomach; they will seldom fail to accomplish this desirable object. We may resort to them not only for the purpose of producing catharsis but various other medicines may thus be introduced and act by being absorbed into the mass of blood or by making their impression on the nerves of the part with which they come in contact. This is a mode of medication which unfortunately is too much neglected and which should in all cases of this kind be put in requisition befor we introduce any thing into the stomach should it fail we may resort to the other mode.

During convalescence great attention should be paid to diet, solid food should be avoided for sometime. The mildest and most uninitating fluid aliment should be used. Exposure of all kinds should be carefully avoided. The practitioner should in all cases draw his own indications of cure from the symptoms which the case presents and employ those remedies which he thinks best adapted to fulfil his indications obtained from the careful examination and study of the case under examination.

The management of Enteritis is similar to that of gastritis the same remedies are applicable to both and they are generally combined the disease being more frequently gastro-enteritis than gastritis or enteritis and the remarks which have been made concerning gastritis may be considered as applied to gastro-enteritis, they are produced by the same causes and require the same treatment and differ but little in their symptoms and pathology except as one involves a greater extent of tissue.

An Inaugural Dissertation,

on Cynanche Trachealis.

Respectfully submitted to the examination,

of the,

Provost, Trustees, and the Medical faculty, of the

University of Maryland.

For the degree of Doctor of Medicine.

By Thos. B. Harris.

of the State of Maryland.

March the 5th

1834.

To, E. Geddings. M.D.
Professor of Anatomy and Physiology in the University
Maryland.

Dear Sir.

Ambitious to achieve one of the noblest
jects which can honour and emulate the character, and desirous
riving at that glorious epoch in life which has so often been
ineated by the sweetest profusions of fancy; I this day enter
on the stage of action which either must be hallowed by grateful
ollection, or be stamped with the most humiliating animadversi
s which can disturb the wonted tranquility, or rend in agony the
ast of man. The idea of success in an undertaking so difficult
ust be truly endearing to me if I succeed, and proportionally
olting if I fail - for as its attainment is insuperably exalted; so
es the want of it, engender tantamount humility and disgrace.
Having had I trust the principles of medicine deeply impressed
n my mind by your kind instruction, and reflecting upon the
altes, the devoutly wished for honour which awaits me at the
reshold of medical investigation, and doubly animated by the

delightful prospect which lies before me - I am induced to venture for the prize as perilous as it may be. The boundless field for intellectual improvement which has been cleared by the labours of men patriotic and enlightened, and the meandering stream of knowledge which waves its beautiful undulations not far off; with silent eloquence invites me to quench my thirst, and inspires me with a jealous determination to go forward until I shall arrive at the transcendent acme of modern improvement. It is to you sir that I owe some of those salutary instructions, which I consider a desideratum in future eminence, and which I hope will remain with me to the latest period of memory. It was the lucid eloquent manner in which you delineated the complex mechanism of the animal structure, that produced in me an emotion of admiration and delight ~~[illegible]~~ which can better be conceived than described. It was your indefatigable labours, your undiminished zeal for the extension of knowledge, and the edification of your class, - that elicited from me a tribute of gratitude, and a concordant spirit of reciprocated friendship. But sir I feel a ~~[illegible]~~ greater obligation for your instructions in private which thus publickly call for an attestation of my gratitude. It was

ere, that you were equally instructive, equally zealous for the romotion of a cause under whose glorious banner you have eceived such honour, and it was there, from the affability of your nanners, and the facility with which you communicated your entiments, that we received instruction, which cannot but redound in honour to you, and edification to ourselves. Eagerly do I avail nyself of the present occasion to bear testimony to your distinguished bility as a teacher, and to declare how greatly you contribute to hold the reputation of our school by your successful and persevering xertions. May you ever be imitated not only by the youth of our untry, but by a majority in our profession, and may you ever receive r your extensive usefulness the approving testimony of your fellow untrymen. Permit me to dedicate to you the following pages s a testimony of my gratitude for favours received, and as a poor nanifestation of that inviolable friendship which I ever must feel or him, whose memory time can never efface; "but who must ever ive enthroned on the imperishable monument of his countrys raise".

I am dear sir with much respect,

Your obedient Svt.

The author.

Cynanche Trachealis.

Definition.— The term cynanche is applied to every inflamation of the internal fauces,- but these inflamations vary exceedingly according to the part of the fauces which may be affected and according to the nature of the inflamation.

There are five species designated by Dr. Cullen; the third of which or Cynanche Trachealis we would consider at present. He defines it thus,— "Cynanche respiratione difficili, inspiratione strepente, voce rauca, tussi clangosa, tumor fere nullo in faucibus apparente, deglutitione parum difficili et febre synocha;" — difficult respiration, whizzing inspiration, hoarseness of the voice, hollow cough, very slight swelling appearing in the fauces, deglutition little impeded, and synocha. Croup was not described with any degree of clearness by the ancient authors. The first regular history of it is to be found in the letters of Martin Ghisi in the year 1749. Dr. Home made it known to the practitioners of Europe, and the fullest account of the disease which has since appeared, is unquestionably to be ascribe to the ingenuity and labour of the distinguished Dr. Cheyne. With regard to the nature of this terrible disease, the majority of practitioners, and our best medical writers have cidered croup as an inflammatory affection; nor can the suddenness of the attack be looked upon as tending in the least to invalidate this opinion. It is an inflamatory affection of the mucous membrane of the trachea and larynx, and according to some authors the inflamation often extends to the bronchia, and over the surface of the lungs,—

thereby producing a preternatural exudation, appearing partly in a membranous coating, and partly in a fluid resembling pus. The greater prevalence of Trachitis among children may according to Albers, admit of the following explanation. In the first place they are more predisposed to inflamation of the mucous membranes; moreover when the disease is connected with the exanthemata; it is observed to be peculiar to persons a tender age. But the cause on which the greatest stress may be laid, is the state of the rima glottidis; this aperture being more than proportionably small in persons under the age of puberty. To which may be added their more frequent exposure to the exciting causes. The inflamation in the croup appears to be of a very peculiar nature. If it was like that met with in common, we might expect to find the same kind of concretion on the surface of the trachea, as its mucous membrane is so frequently the seat of inflamation; attended with preternatural secretion. The matter expectorated has been supposed by some, to be possessed of properties very different from those of the mucous, which is thrown out from the membrane of the nose, or trachea in common catarral affections. Hence some practitioners have considered as a consequence, that the film which we observe in croup is not the product of the mucous glands, but is rather a secretion from the exhalent arteries, and that it is analagous to the inflamatory exudation

resulting from the increased morbid secretion of internal membranes. Says Dr. Makenzie – the comparatively rare occurrence for a serous membrane to secrete puriform fluid, or for a mucous membrane to become coated by a fibrinous exudation; is liable to be overlooked by us, ille we call to mind the appearances displayed on dissection, – in cases of croup on the one hand, and of puerperal peritonitis on the other. And continues our author – slight inflamation, such as what occurs in a common cold; pours from the membrane of the trachea, – throat and tonsils a copious secretion of puriform fluid; – but in that peculiar disease called croup, the same membrane secretes a crust of fibrin, and as far as I know this is the only instance in the human subject, of a mucous membrane being affected with what, may be called fibrinous inflamation. According to the experiments of Schwilgue, this membranous substance is insoluble both in cold and in boiling water, but perfectly soluble in a solution of the alkalies. By incineration, it yields deutocarbonate of sodium, proto-phos-phate of lime, &c; corresponding thus entirely with the properties of coagulated albumen.

Croup has been divided into spasmodic and inflamatory, and a great deal of discussion has originated in reference to this truly important subject. Its importance will readily be admitted when we reflect and I speak it with the utmost reverence)

that thousands have been consigned to the grave by the untimely and officious administration of medicines denominated antispas=
=modics,— when by a timely, judicious, and persevering adherence to that system found to be so eminently salutary in inflamation, life might often be saved, and a stigma of opprobrium withheld most justly from the noble science of medicine.

It is a matter of great astonishment to me; that a disease so manifestly phlogistic in its character, should still be considered by many as essentially and virtually spasmodic, or at least totally independent of a truly general, or local inflamatory condition. Says our distinguished professor, Dr. Potter, in his valuable notes to Dr. Gregorys practice of physic — "If time and space would admit of the necessary reasoning, it would not be difficult to demonstrate, that no spasm can be formed in croup, nor in either of the diseases, of which the upper appendages to the lungs are the seats. The inflamation sometimes extends from the lining of the trachea to the muscles surrounding the glotis, and in other cases it commences in those muscles and travels downwards; but the situation and office of all muscles is such, that they never can close the passage into the wind pipe. When in a state of inflamation an irritating cause acts upon the muscles great pain and tension are excited, but they are so completely antagonized that they cannot close the passage." "From the remote cause of the disease says

Dr. Cullen, from the catarral symptoms commonly attending it; from the pyrexia constantly present with it; from the same kind of preternatural membrane being found in the trachea when the cynanche maligna is communicated to it; and from the vestiges of inflamation on the trachea discov=ered upon dissection, — we must conclude that the disease consists in an inflamatory affection of the mucous membrane of the trachea and larynx. How perspicuous and intelligible are the above transcripts? and how eminently do they contribute to the corroboration of my sentiments? Need I look for more proof? No! — for two names more conspicuously eminent I could not have selected from our noble band of professionable brothers. One of them though aged, is still alive, to add more lustre to his name, — the other though dead, still lives in the minds of his countrymen.

The advocates of the spasm form of the disease assert that it never terminates either in suppuration or gangreen, and that the pulse never in the least exhibits signs of inflamation. Now it is a fact well known to every attentive observer, that death often takes place from the obstruction of the passage with coagulable lymph; in a space of time too short for suppuration to be accomplished; the adventitious membrane or mass of coagulable lymph, becomeing so compact, and agglutinated, that a total obstruction of the passage is effected.

If the physician is present at the first stage of the disease, he certantly will be aware of inflamatory action. But the great deception which exist in the pulse is unquestionably to be ascribed to impeded respiration. I hold it to be a fact incontestible; that if the influx of the air into the lungs be impeded or diminished; the systole and diastole of the heart and arteries will be impeded and diminished in a proportionate degree, – hence that will be sufficient to account for the contracted pulse that attends the confirmed stage of the disease.
Then it must be inflamatory, and if we would cure the disease we must nullify inflamation. ———

Cause – The chief subjects of this disease are children, from the time they are weaned, till they arrive to the years of thirteen or fourteen. After they are weaned, the younger they are the more liable they are to an attack. ~~Black or of the inflammatory affections for which a predisposition appears to be greatest. Certainly it is known that the children of some families are more disposed to it than others. Indeed this predisposition is to be ascribed to causes which are hereditary.~~
It appears to be more prevalent in marshy countries, and in situations near the coast. Cold is the chief exciting cause. It prevails more frequently in winter, and spring, than at any other seasons of the year, and appears to be particularly liable

to occur from sudden changes in the weather. The sudden change of temperature, arising either from a diminution of clothing, or from carrying a child from a warm room to one that is cold and damp, has been known to produce the disease. Moisture applied to the body, especially to the feet, and a frequent exposure to a cold easterly wind will also produce it. — The season of childhood we know to be liable to many diseases, and to be fraught much danger; hence that sedulous care which best comports with a just appreciation of that tender age, ought ever to be manifested by those, under whose care and guardianship they may have been consigned. But how often to our utter astonishment do we see the most sedulous care to-day, when to-morrow the greatest carelessness and indifference will be manifested. Such extremes we believe to be prejudicial to health, and greatly productive to the developement of disease. If we wish children to enjoy a respite from disease, we must be careful and uniform; but if we relax and inconsistently wander from that rule, then disease may be anticipated and often its frightful concomitant death. Prognosis, — Croup is always to be regarded as a very dangerous disease. Formerly a majority of cases terminated fatally; but now under its present improved pathology, and mode of treatment, the number of fatal cases are greatly diminished. The chief critical symptoms however are a

spontaneous flow of sweat, which sometimes last for a considerable time. Vomiting and diarrea are also sometimes attended with a mitigation of the symptoms. Dr. Bard says, salivation sometimes proves critical, as well as a copious sediment from the urine. Dr. Rush observes, that he has frequently seen an eruption of little red blotches in the croup, which generally brought great relief. Upon the whole whatever be the attending symptoms, if the pulse become fuller, more steady, and less frequent, the breathing freer and less hurried; the peculiar sound of the voice and cough begin to wear off, and the patient appears less anxious and oppressed, the prognosis is good, and by caution and perseverance we may conduct the case to a successful termination. The degree of danger appears to be proportionate to the violence of the inflamation, and the extent to which it may have passed downwards into the pulmonary passages. It would appear also, that the more sudden the attack, when marked by strong excitement, the greater in general is the danger. It must be observed that the prognosis in this disease is extremely fallacious. Sometimes the symptoms yield to the great satisfaction of the practitioner, and surrounding friends, and on a sudden, a violent exacerbation supervenes, destroying every hope, and blighting every preconceived anticipation of a happy convalescence. Perseverance is here absolutely essential to the subversion of the disease.

The symptoms, — This disease often makes its attacks with a degree of dyspnœa, which often comes on very suddenly. As it increases the breathing becomes quick and hurried, with a wheezing sound, apparently from the passage of the air being straitened. The child appears fretful, and inactive, the eyes are somewhat suffused and heavy, and there a cough, which from the first has a peculiar shrill sound, very easily to be recognised by those who have previously witnessed the disease. The dyspnœa sometimes increases with great rapidity, in other instances so slowly, that the patient complains of some difficulty of breathing for several days previous to a severe attack. The state of the breathing at length becomes truly alarming; the little sufferer appears from frequent anxious looks to implore assistence, and to the spectators to be in the immediate agonies of death. The shoulders are raised at each inspiration; the abdominal muscles act violently, and a strong alternate elevation of the ribs and scapula takes place, — a striking characteristick of difficult respiration. The voice and often the cough has a peculiar ringing sound, which has been compaired, with much justness to the shrill noise issuing from a brazen tube, or to the fanciful similitude of a cocks crowing.

The cough is generally dry. There is occasionally a slight expectoration, especially after the disease has continued for some time; evincing

often a purulent appearance, and often marked with specks of florid blood, or it is ejected in whitish flakes, resembling pieces of membrane, which is the adventitious coating of the trachea spoken of by authors. With regard to the immediate seat of this fibrinous exudation, and the quick though often subtle manner in which it is propagated, – is related by Dr. Makenzie in the following words. – "The fact to which I refer is, that the exudation of fibrin frequently commences on the surface of the tonsils, thence spreads along the arches of the palate, coats the posterior surface of the velum palati, sometimes surrounds and encloses the uvula, and at last descending covers the internal surface of the pharynx and oesophagus, the larynx and trachea. That this is the frequent progress of the disease, our author is convinced from careful and repeated observation of the phenomena during life, and upon dissection." The peculiarities in the fauces are generally swelling and inflamation; the velum pendulum palati is often intensely red, accompanied often with a kind of convulsive and involuntary throwing of the head backwards, as if in the attempt to escape suffocation. The deglutition as appears from a wise provision of nature, is scarcely ever difficult, or even at all impeded. The appearance of the face is the same as in other instances of great dyspnoea; at first red and swelled, and as the disease progresses, purple

and livid. There is often according to Dr. Wilson a degree of soft white swelling externally about the larynx, which sometimes spreads along the course of the trachea. The hands and feet too are often affected with the same swelling. The tongue is considerably coated. It has been observed that the disease makes its appearance very often without the developement of general constitutional symptoms; some cases as I have observed, the patient appears to be oppressed with a general lassitude and languor before the dyspnoea becomes very troublesome. As soon as the difficulty of breathing becomes considerable, the pulse becomes frequent strong and hard; the patient complains of head-ache, and becomes restless with a hot parched skin, thirst and a white and often foul tongue. The urine is generally limpid, discharged in small quantities and sometimes with great difficulty. In the progress of the disease it is passed in greater quantity, is turbid, and towards the favourable termination of the disease, generally deposits a copious sediment; which has been absurdly considered by some as attributable to the absorption of purulent matter from the trachea. The bowels are generally costive during the whole of the complaint, and often much inflated. Vomiting is not very common, but when it does occur, may be considered favourable. But if the symptoms above enumerated do not abate, then the

pulse begins to loose its strength, and hardens, and becomes weak tremulous and intermittent, with remarkable frequency.
This is to be considered a dangerous state and indeed if a solution of the disease is not quickly affected by the most potent and energetick practice; death must speedily inevitably occur from a horrible suffocation.
If the symptoms are severe, and without remission; the patient very seldom survives, more than three or four days, and very frequently dies in the short space of twenty four hours. In the more lingering cases, the symptoms gradually increase, and many of those which precede death in other febrile diseases supervene; the mouth becomeing very foul, the respiration more hurried and difficult with great restlessness and dejection of spirits. The pulse in such cases is according to the observation of some practi=tioners, is near two hundred, tremulous and irregular, at length it can scarcely be felt; the extremities become cold, and death quickly closes the tragic scene.
It is a matter of considerable importance to the practitioner to discriminate accurately between a remission and a complete radical solution of the disease. The specious aspect of deception, which not only often becomes a striking characteristick of this, but of many other diseases and infirmities of our nature, cannot be too

sedulously guarded against by all those to whom the important commission of medicine is entrusted.
An erroneous conception here by inducing the practitioner to abandon the energetic cooperation of potent means, and by exciting a delusive hope that health is again gleaming through a Hippocratick gloom; will often eventually arrouse him to a mortifying conviction resulting from an incapacity to relieve, and break upon his view an unexpected scene of approaching dissolution. Hence so long as there is manifested any aberrations from the harmony and perfect order of health; so long as the little sufferer appears dejected and oppressed, we should not entirely relax; but with a discriminating judgment proportion our remedies to the urgency of the concealed and deceptive forms of the disease. It appears necessary that I should here dwell a little on a disease, which from the similitude of a few symptoms has been taken for Cynanche Trach-ealis; but which may readily be recognised as constitu-ting a different disease under the appellation of acute asthma. It will be my endeavour to make a few expositions by which we may arrive at a correct diagnosis, and as a consequence by which legitimate deductions may be drawn relative to the mode of cure. It has been denied

that acute Asthma could occur before the age of puberty, but it is the opinion of Dr. Gregory that the period of youth and manhood is the season best calculated for the developement of the disease. By some of the disciples of the spasm form of Croup, it has been complicated with that disease, and from novelty and frequent usage it has received the appellation of Spasmodic Croup. Asthma we know is often entailed upon children by asthmatic parents, or in other words, it is often developed by hereditary predisposition: Croup on the contrary we know is not dependant on original conformation, but on the manner in which the child is raised, and on the vicissitudes of our seasons. Asthma we know too is often dependant upon a peculiar irritability of the pneumo-gastric nerve; producing morbid excitement in the lungs — Croup we know to be characterised by inflamation of the mucous membrane of the larynx and trachea. But independant of what has been said above, we find that the symptoms of croup are so different from those of acute asthma, that a perfect diagnosis may be formed. In the former the cough is frequently ringing, in the latter ther is little or no cough. In croup there is seldom any remission, whereas in asthma, it is one of the most striking characteristicks of the disease, and

it is according to some authors, generally attended with some evacuation, such as belching, vomiting or purging.
In croup the pulse is strong, with much febrile heat, the urine high coloured and the voice shrill and small; In acute asthma although the pulse be equally quick, is less full, the urine is limpid and the voice croaking.
The Cure. From the appearances made manifest on dissection, and the symptoms which attend the disease, there can be no doubt but that it is of a highly inflammatory nature. It is obvious then that the indications to be kept in view in its remediale management, are — 1st, to subdue the local and general inflamatory action as speedily as possible, and — 2d, to promote the discharge of viscid, and coagulable secretions which are lodged within the superior portions of the respiratory tube. The remedy which first strikes our attention as being capable of answering so important an indication as the first, is blood letting.
It is decidedly antiphlogistic, and according to the pathology of the disease which we have adopted, the most salutary remedy we can resort to, as a means, of breaking down the inflamatory action which exist in the tracheal mucous membrane. In no county is blood letting more resorted to in diseases of the above inflamatory type as in America. And need I say that Americans have appreci-

-ated the efficacy of this practice by the flattering success which has crowned their benevolent exertions; - whilst in Europe it was until late looked upon as equivocal, and by many as a very injurious measure indeed. We cannot attribute the success which of late, has resulted in the treatment of this terrible disease, or the very appreciable difference in its mortality, to any thing more, than to the adoption of a more correct pathology, and as a natural consequence, the adaptation of their remedial agency. If we compare the success in the treatment of the above disease in this day; with the mortality in days that have glided by; - when specifics lulled the mind in deceptive tranquility, and when the ruthless hand of empyricism (unstayed by prudence, ungoverned by a discriminating judgment) was deceptuously sapping the vitality of thousands; to contemplative mind how great must the aggregate appear? But to our subject. The good effects of the lancet is confined in this as well as in the other phlegmasiæ, to the early period of the disease. No matter what other remediate measures may be resort-ed to, if bleeding be neglected or inefficiently employed, the progress of the disease may be rapid, and perilous in the extreme. So if called to a patient labouring under Cynanche Trachealis, in whom there is very conspicuous

manifestations of high arterial excitement, and active tracheal inflamation, — I should most unquestionably open a vein, and suffer the blood to flow, until an approach to syncope be induced. Generally all the alarming symptoms subsid after the above operation; but should they not subside, in the course of an hour or two, and the pulse is not feeble and soft; then we must again resort to the lancet; having our attention directed to the pulse, and to the general urgency of the symptoms, we may take a considerable quantity of blood with manifest utility to the little sufferer. Dr. Eberley states that he has been compelled to open a vein, three or four times in the course of twelve hours before he could subvert the disease. In general such copious depletion is not demanded, and we very rarely meet with cases in which one bleeding with the other ordinary adjuvants will not cure the disease. We are told by Dr. Eberley that after effusion which gives rise to the formation of the membrane has occured, bleeding will afford but moderate and temporary advantage.

Emetics, are very important remedies in the treatment of this disease, and indeed are often indespensable. In those cases attended with a copious secretion of viscid mucous in the larynx and trachea, emetics are eminently

useful. They tend not only to expel the tough compacted mucous from the larynx and trachea, and thus give a temporary freedom from the dyspnœa; but also to equalize the circulation; to promote cutaneous exhalation, and also by the nausea which precedes and accompanies their operation, to diminish the general excitement of the system.

But notwithstanding the manifest utility of emetics in croup; yet we say it with lamentation, that the greatest difficulty is often experienced, by our inability to command emesis. In the last stage of croup there exist so much torpor and insensibility of the system; in consequence of the imperfect decarbonization of the blood, and vascular congestion in the brain; that all our endeavours to procure emesis are totally banished. To obviate this gastric irritabelity, and to diminish the inordinate congestion in the brain; we should place the patients feet in ~~cold~~ warm water, and apply a napkin wet with cold water to the head. The abstraction of blood in an erect posture, and to a sufficient extent, will rarely fail to insure perfect emesis. The articles generally used as emetics in this affection, are the Vinum Antimonii, the Ipecac, Tart. of Antimony and Sulphate of Zinc. The two first are used in the mildest cases, and generally to counteract those symptoms which precede an attack. But where the

symptoms are very violent, and immediate dissolution expec-ted, from the accumulation of coagulable lymph in the larynx and trachea — then it is very evident that the more powerful emetics will be indicated. Dr. Eberley states that he has seen great good resulting from the administration of Tart. of Antim-ony and Calomel — in the proportion of one fourth of a grain of the former, to five or six grains of the latter, to a child from two to five years old. The nausea produced, he says, is very great, and consequently it must exercise a powerful antiphlogistic tendency. Our distinguish profes-or Dr. Potter, recommends the above combination as a powerful antiphlogistic, but in larger doses than those given by Dr Eberley. In one nigh he gave ℥ii of Calomel and ʒi of Tartrate of antimony. He also recommends as a last resort, that we should endeavour to vomit our patient with the bicloride of mercury — a teaspoonful may be given every fiftien minutes; in the proportion of 1 grain of the bicloride, to ℥i of water. He asserts that the above solution has often proved efficacious in his hands, and that it may be given without the fear of producing ptyalism. In many cases it is necessary to repeat the emetic three or four times in the course of twenty four hours.

Purgatives, are very useful adjuvants in the treatment of this disease. In the commencement of this we should evacua

-te the intestinal canal by a brisk cathartic, and subsequently keep the bowels open by laxative enemata. They act not only as revellants, favouring a happy termination of the disease, but also as evacuants, carrying before them irritating matters previously accumulated in the intestinal canal, and which if suffered to remain, may act as an excitant to parts already too much excited.

Calomel, given with a design to its constitutional influ-ence, is a remedy which has been much applauded by many highly distinguished members of our profession. It is computed by many to be our only means to remove tracheal mucous inflamation. Our distinguished countryman Dr. Rush placed great reliance in mercury - for he emphat-ically asserts, that when given in large doses, in the commencement of the disease, and continued afterwards in smaller doses; it is hardly less efficacious in this compl-aint, than the peruvian bark in intermittent fever. Dr Bard places also much reliance in the constitutional efficacy of calomel in croup. In the chronic form of croup the above mode of procedure I think to be a correct one; but in the ordinary forms of croup I think we would be tampering with the life of our patient by shearing out calomel, to the neglect of other more powerful means. Calomel when given in the disease, ought to be given

in doses capable of making a decided impression. It is useless to administer it in small doses, for we are gaining nothing by such a procedure, and we are loosing time both precious to ourselves an patient. One hour in the disease is a great thing, and many a physician has anxious desired it. After the operation of one or two emetics we may give Calomel united with Ipecac or Tart of Antimony. The Warm bath is a very useful auxiliary in the treatment of this disease. Employed in conjunction with the remedies already mentioned, when the skin is hot and dry, manifest relief may be experienced. It tends to promote, with blood-letting, a sensibility of the system to the impression of emetics; It determines the blood to the surface, and by relaxing it, causes diaphoresis. Its usefulness I think is confined to the early period of the disease. Bathing the feet in warm water we know to be a powerful revulsent, and ought always to be resorted to from time to time. Blisters, Conjoindly with the preceding remedial measures; external rubefacients, and vesicating application ought always to be employed. After blood-letting we should apply a blister to the throat, or some other irritating substance. Blisters have been highly extolled by many practitioners, but in many cases I think their operation is too slow, and consequently ought to be superseeded by those applications

which are more energetick in their operation. Sinapisms may be employed in their place to the throat, or the still more irritating application of Spirits of Turpentine. Children will seldom bear the application of Turpentine longer than twenty or thirty minutes; It must therefore be removed, and again reapplied, pro re nata. The promptitude with which rubefacients act on the skin, I think (independent of other reasons) ought to entitle them to our preference — for it is a circumstance of no small consideration in a disease, which often runs its course in a few hours. I think it would be superfluous for me to mention, many other remedies which have been recommended in the treatment of this diseas. Those that have been mentioned, experience has proved to be the only remedies of cure. Time the great expositor of all things may yet through the agency of man, reveal to us remedies of more potent power, than those already enumerated. The improvements in science justifies the hope. But notwithstanding the many remedies which we have to counteract the disease; the Physician must often approach the bedside with feelings which cannot be described, and often realize the melancholy fact — that medicine distributed from the most skillful hand, must sometimes fail. It destroys with unrelenting cruelty many of the junior portions of our race, even before reason dawns the soul.

A Dissertation
on
Consumption
Submitted to the inspection of the
Surgical Graduating Academy
of the
University of Maryland
for the degree of
Doctor of Medicine
by
John C. Blackwell

A dissertation
on
Consumption
Submitted to the inspection of the
Provost Trustees Faculty
of the
University of Maryland
for the degree of
Doctor of Medicine
by
John C. Richards

To
Samuel Baker M.D.
my honoured preceptor
this
is most respectfully
dedicated
by
J.M.C.

In discussing a medical subject it is natural to all to wish to leave the beaten track so long trod by medical authors and endeavour to strike out a path themselves that may lead to the discovery of something more successful in the treatment of disease. I mean not to say I shall be so fortunate, I shall be content if I succeed in giving a plain and simple statement of facts.

Phthisis is divided by authors into several varieties, the most natural division is, that I think followed by Dr Eberle Catarrhal Phthisis, Tubercular Phthisis. & Laryngeal or Tracheal Phthisis. First Catarrhal Phthisis. This disease is of frequent occurrence in cold and changeable climates and brought on most commonly as its name implies from neglected catarrh. When called to see a patient labouring under this form of consumption

the first symptom that strikes us as most characteristic is the very quick and frequent pulse. The skin is hot and dry especially towards evening, the difficulty of breathing is very great and the patient can not lie in the recumbent position but desires to be seated in bed with his ~~his~~ head and shoulders supported by pillows. This however says Dr Armstrong is not always the case as I have known some persons who preferred or found more relief in the recumbent position on account of the expectoration being more abundant. Great tightness is at times felt across the chest and occasionly the patient will cry out that the sides of the chest appear to be approximating. This is felt particularly on rising out of bed in the morning accompanied with sonorous respiration. Large quantities of mucus are now dis

charged which as the disease advances becomes more or less purulent. The hands and feet are often cold, the eyes very brilliant, the lips of a sickly leaden hue and one or both cheeks slightly flushed. Exhausting night sweats come on and great emaciation shortly supervenes. The tongue has a shining and red appearance and has been aptly compared by Dr Cotter to a piece of raw beef. This state of things lasts but a short time the patient being most universally carried off by colliquative diarrhoea. To distinguish pus from mucus Dr Young has given us a plain and simple expedient. He says he a little of the substance to be examined be put between two plates of plain glass, and while held near the eye looked through a distant candle, we shall discover even in the day time a bright circular corona of colours of which the candle is the centre a red

area being surrounded by a circle of green and this again by another of red, the colours being so much brighter as the globules of pus are more numerous and equable. If the substance however be simply mucus, there will be no rings of colours, although sometimes there is a sufficient mixture of heterogenous particles even in mucus to cause a reddish area alone. The second variety of this disease namely tubercular Phthisis never effects any but those of scrofulous diathesis though Dr Rush asserts it is of no consequence whether the patient be of strumous habit or not as the tubercles formed in the lungs are nothing more than hardened mucus. On what foundation Dr Rush makes this assertion it is difficult to tell, as we universally find those persons affected with this disease at some period or other giving

unquestionable signs of particular habit. Persons predisposed to this disease have the skin thin, ruddy complexions, light hair and blue eyes. The disposition is lively and gay, the mind keen and penetrating and the body vigorous. Sometimes the skin is pale and the circulation sluggish. The symptoms are various and numerous and numerous. At first the patient complains of slight tightness in the chest which is very much increased by exercise. He is always complaining of cold and never feels comfortable unless seated by a warm fire. At night though he may be covered with blankets that would make a person in health cry out he was suffocating, yet still he is cold. The pulse now becomes more rapid accompanied by a tickling cough, and in the evening he is feverish and irritable

On waking in the morning he perceives he is not refreshed by his sleep, and should any one wish to arouse him from his bed he will exhibit great unwillingness, complaining of languor and lassitude. At this time his cough is most severe. About the middle of the day he feels much better and is willing to engage in active employment. But this is of short continuance for towards night he becomes again feverish and irritable. These symptoms are more or less severe according to the state of the weather. Should the day be fine, the air moderately warm and balmy, he will exhibit no one symptom that would lead us to believe he was on the threshold of this incurable malady. He will converse gaily and lively with his acquaintances and cause them to believe their anxiety

on his account was unfounded. But let the day be damp & chilly and every symptom is aggravated. His friends who were just now elated with the hopes of his recovery are again hopeless and desponding. The tongue becomes slightly red and shining, the sputa which at first exhibited all the characters of mucus purulent and the patient is troubled with chills towards evening. Dr Eberle remarks that the palms of the hands and soles of the feet are dry and burning. The fauces lips and tongue are so parched that cool and acid drinks are called for every few minutes of the day. The exhausting night sweats are profuse, so much so that the sheets of the bed are completely saturated. Should these sweats be checked the disease is greatly aggravated, almost immediately ter-

minating in diarrhoea. The pulse beats so rapidly that its undulations can scarcely be distinguished. Its general beat however says the last mentioned author is about 130 in a minute during the evening exacerbations, but not above its natural frequency in the morning. Laryngeal or Tracheal consumption which results from ulceration runs its course immediately. This is a disease which if not treated vigorously and boldly in the first stage is sure to terminate fatally. It was the advice of an old physician that not the slightest symptom in this disease should be neglected so certainly fatal is it if we pass over any one mark unheeded. The patient complains at first of slight tickling cough which is not attended by any expectoration. But he is very apt to neglect and let run on for some time

considering it a mere catarrh which will pass off in a few days and consequently not worthy the notice of a physician But how mistaken is he instead of becoming better he daily grows worse and together with the cough he soon experiences change of voice &c When the larynx is the seat of disease the first words in the morning are uttered with considerable difficulty The pain in the larynx or Trachea is always increased by pressure and by the inhalation of irritating vapours. When the Trachea is the part affected an increase of the pain is experienced on bending the head backward &c In laryngeal consumption should the patient swallow he is seized with the most distressing cough, and this is caused not by any want of care in swallowing for it is universally the case and

continues to the termination of the disease. There is one thing we should not neglect to speak of in this place, that is spoken of by all authors on this subject, and that is in Tracheal consumption the discharge of sputa is very great, whereas in Laryngeal it is is very little. The remaining symptoms are the same as those of Catarrhal Phthisis, hectic soon coming on and shortly terminating the existence of the wretched being. These are the most prominent symptoms of the three varieties of Phthisis. The next thing before proceeding to the treatment will be to enumerate the causes. Hooping cough when left to itself without any medical treatment most generally terminates in this way. Measels also frequently gives rise to this disease especially if during the

emption the patient is exposed to a change of temperature. Irritating vapours, and particles of matter floating in the atmosphere are said often to give rise to this affection. Hence we find stone cutters millers particular subject to it, as much so as workers in paint are to Colica Pictonum. The causes of Tubercular Phthisis may be as in the preceding, hooping cough & measels, their influence acting upon a system predisposed to this disease. Frequently the predisposition has existed in parents and for want of an exciting cause they have lived to a good old age, whereas the children not being so fortunate have been prostrated by it. Syphilis, the drying up of old ulcers, checked cutaneous eruptions are all exciting causes. The former of these

when received into a system predisposed to Scrofulous affections never fails to give rise to it. The same causes that give rise to catarrhal Phthisis may also give rise to Laryngeal and Tracheal. In treating this disease all our judgment is called into play; should we make the slightest slip, our patient is immediately hurried into eternity. We should therefore be careful to determinate with nicety and act up to that determination. One thing should be constantly born in mind, that it is not medicine alone that is to do good in this affection, but attention to the diet and clothing is also requisite. Catarrhal Phthisis which is chronic inflammation of the Bronchia in the first stage will require that blood should

be taken, but as there is generally a great deal of irritability we should be extremely cautious how we employ the lancet. For fear this irritability should be increased it is therefore properly recommended that we should make use of cupping and leeching. As external irritating applications many things have been used, blisters setons moxa &c but nothing has been found so highly beneficial and less distressing to the sufferer as the Tartar Emetic ointment. Digitalis in union with squills when the expectoration is purulent has been given with advantage. Balsam of Copaiva has been given by Dr Armstrong with benefit, he thinks it has a specific effect on the mucous membrane of the Trachea and Bronchia, it increases the flow of urine, keeps the

bowels moderately open and sometimes excites a peculiar itching of the skin. Opium Prussic acid & bark have all been used, their good effects depending of course upon the time they are exhibited. But as I have said before, medicines will do no good without proper attention is paid to the clothing. Flannel should be worn next the skin and temperature which he breaths should be equable. The treatment of tubercular Phthisis is altogether palliative. As for the disease being thoroughly cured, it is impossible. Our chief object is to prevent the progress of the disease. We should as in the above case advise the patient to breath air of an equable temperature and pay strict attention to his clothing. Gentle exercise, riding, walking, sawing wood is very useful. The diet should

be vegetable. When there is an inflammatory condition of the system blood letting is recommended, but I should prefer Digitalis and antimony. Tartar Emetic plaster to the breast is one of the most valuable remedies we possess, its success has been far greater than bitters. When hectic has come on the attention must be called to those medicines that give tonicity and vigour to the system. The diet should be of the most nourishing kind. To check the night sweats Dr Eberle recommends 4 or 5 grs of Acetate of Lead every evening in union with Opium. It is not necessary that I should run over all the different medicines used in this disease; if these fail adopt others of the same kind. The treatment of Laryngeal & Tracheal is included in the other two.

An

Inaugural Dissertation

On Hernia

Submitted to the examination
of the
Provost, Professors and Trustees,
of the
University of Maryland
For the
Degree of Doctor of Medicine

absent By

Kendal Hooks

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Inguinal Hernia

The term hernia might with propriety be applied to every swelling produced by the dislodgement of parts from the boundaries within which they are contained in a state of health, but the term is at present more particularly confined to tumours produced by the protrusion of some of the viscera contained within the cavity of the abdomen

The parts through which hernia is most apt to occur are those of the inguinal canal, under poupart's ligament, through the thyroid hole, at the ischialic notch, and sometimes they protrude through the diaphragm, and sometimes a portion of gut may be thrust through the mesentary or through the interstices of the abdominal muscles, and through the umbilicus

The situation of these tumours is various, but their contents is still more so, indeed in different cases of hernia perhaps nearly the whole of the abdominal viscera has been protruded from its cavity, such as the intestines and omentum the stomach, parts of the liver, the uterus, the spleen, and the bladder have been found in the sac, but the parts most frequently found in the tumours will be those of intestine and omentum

From the situation and contents of the hernia all their appela tions are derived by which they are distinguished, thus they are denominated inguinal when they descend through the inguinal canal, femoral when under poupards ligament, umbelical when at the Umbelicus &c, they also receive names according to the particular viscera that may be contained in the sac, thus when the sac is filled with intestine alone, it is called an enterocele when of omentum alone it is denominated epiplocele, and when the sac is filled with both intestine and omentum it is denom inated an entero-epiplocele.

The subject upon which I design to make a few remarks is that of inguinal hernia, although a subject upon which there has been much said, so much indeed that I can do little more than repeat that which has been said by others, yet the subject is not void of interest, nor indeed it cannot be, so long as man is exposed to so formidable a disease, and the understanding and skill of his fellow beings is called upon for relief

That we may the better understand hernia it is necessary to be acquainted with the anatomy of the parts concerned I shall therefore give as good a discription of the parts

as my knowledge of the subject will permit and in doing this I shall take the parts in the order in which they are found in dissection begining with the

Superficial Fascia, this is a membranous structure pre vading every part of the body and lying immediately under the adipose substance of the common integaments, and from its spreading over the abdominal cavity and continuing down upon the groin and into the cavity of the scrotum it deserves our particular attention in the consideration of hernia, after we have removed the common integaments from the abdominal walls this fascia is seen covering the external oblique muscle and obseuving its fibers, but without removeing the fascia we we can see the boundaries and tendinous commencement of the muscle, by desecting down and exposing the glands of the groin they seem but two simple elevated bodies before the fascia is removed, but poupards ligament may be seen through out its whole extent, this fascia is found to adhere but slight - ly to the muscular part of the external oblique being easily raised by the knife, but in tracing it down upon the tendon it becomes much more firmly attatched, particularly

at the part where it becomes connected with poupart's ligament, but by the skilful use of the knife it may be seperated into two lamina; a superficial and a profound, in tracing the profound we shall find it passing below poupart's ligament for a short distance and then to become reflected upwards and backwards to be attatched to poupart's ligament at its posterior edge, in tracing the superficial lamina we find it going down upon the groin and sending of a great many processes which dip down and embrace the glands situate in this region, so that in seperating the fascia we find the glands ready to come away with it, there is another portion of this fascia which passes of from the external ring, and passes down upon the chord into the scrotum, forming a complete covering for the chord and testicle, this portion is somewhat more dense than the parts above

External oblique muscle is the first we come to after rasing the superficial fascia, it is broad and flat covering all the anterior part of the abdomen, the posterior part is fleshy and arises from the eight inferior ribs. by eight distinct slips the extremities of which are blended with the pectoralis major, the serratus major anticus, and latissimus dorsi, the superior fibers of this muscle run nearly horizon

tally across, the middle obliquely downwards and forwards, and the posterior directly downwards, these fibers after running in these directions from the place of origen terminate in the linea semilunaris, its tendinous portion continues from the linea semilunaris to the place of attachment, which is the linea alba, pouparts Ligament, and the spine of the illium in examinging the middle portion of this muscle wee find its fibers seperating as it descends so that near the pubis there is a considerable opening left, this opening is about an inch and a half in length and three forths of an inch in width, the tendon forms a pillar on each side the outer pillar of the opening is attatched to pouparts ligament and forms the anterior boundary of the oblique canal, the portion of the tendon which forms the internal pillar of the passes down to be attatched to the pubes, but instead of being attatched to the side to which it belongs it passes over to the opposite side and interlocks with its fellow by which the strength of the parts are much increased. Pouparts Ligament is a firm ligamentous substance which stretches from the superior anterior spinous process of the illium, to near the symphysis pubis, in its course it increases somewhat in breadth and its lower margin turns upwards and backwards so as to form a kind of grove which enters into the formation of the canal

Internal oblique muscle is situated immediately under the preceding and forms the middle of the three broad muscles of the abdomen it is smaller than the external oblique. and occupies the space between the cartilages of the of the last five ribs, the crest of the illium, the pubes, and the linea alba, its fibers run in a direction opposite to those of the external muscle for they run obliquely downwards and forwards, while those of the internal run obliquely upwards and forwards, this muscle takes its origen from the lumbar aponurosis, from the crista of the illium and from poupards ligament, and becomes attatched to the five false ribs, to the ensiform cartilage, to the whole length of the linea alba, into the symphysis and part of the pubis, the lower portion of this muscle from its origen and insertion must necessarially pursue a course different from that of the other portion of the muscle, the fibers that come of from poupards pass at first obliquely upwards and forwards, for a short distance and then they turn downwards and become attatched to the pubies, forming a kind of arch under which the chord passes out from the cavity of the abdomen, the portion of the muscle that is attatched to the pubes, together with the transversalis forms the posterior boundary of the oblique canal, and

forms the principal obstruction to hernia by the direct descent arising from pouparts ligament at the lower edge of the last muscle there is a small bundle of fibers called the cremaster muscle, these fibers pursue the course of the chord in the canal but do not become attatched to it as will be seen from the description of other parts continuing its course in this direction it passes out at the external ring, the fibers now begin to seperate and apparently in most cases loose themselves in the tunics covering the testicle, but in stead of thus disappearing it is supposed that they expand and pass round the testicle and come up upon the opposite side and become attatched to the pubes, forming a kind of loop in which the testicle is suspended. I have seen two cases in which this was well demonstrated

Transversalis abdominis is the internal of the three broad muscles forming the abdominal walls, its fibers pursue a course transversely from behind forwards, it comes of from the inner surface of the cartilages of the six lower ribs, from the transverse process of the last dorsal, and the four superior lumbar vertebrae, and from the inner labium of the crista illi, and from pouparts ligament its fibers pass forwards and become attatched to the ensiform cartilage

the whole length of the linea alba, and into the pubis, the lower portion of this muscle forms an arch somewhat like the internal oblique and these two muscles form the upper boundaries of the oblique canal, Rectus abdominis is a long narrow muscle situated one on each side of the linea alba, and stretches from the sternum to the pubis, it comes off from the fifth, sixth, and seventh ribs, and from the ensiform cartilage it runs down parallel to the linea alba, and becomes attached to the upper face of the horizontal branch of the pubis, the tendon serving to strengthen the parts so as to prevent hernia by the direct descent Pyramidalis are two small muscles one on each side, they come off from the pubis near the symphysis, and pass upwards in front of the recti muscles for two or three inches and there become attached Fascia Transversalis, this is a membranous expansion lining the whole of the abdominal parietes, and becoming continuous with fascia lata of the thigh, and also with the pericardium of the heart, this membrane is situated between the transversal-is muscles, and the fascia propria, it is differently named according to the parts which it occupies, thus in the illiac region it is called the illiac fascia, and where it is situated upon the transversalis muscle it is called the transversalis fascia

as it passes down upon the anterior walls of the abdomen it becomes firmly attatched to poupart's ligament, but it passes by this ligament and becomes continuous with that portion lining the posterior walls of the abdomen, and thus it forms a complete sac containing the whole of the abdominal viscera, at the lower part of this fascia at about half the distance between the spine of the illium and the symphysis there is an opening which has usually been denominated the internal abdominal ring; it is at this part that the spermatic chord makes its escape from the cavity, and we find as the chord passes out that it carries before it a portion of this fascia which envelopes it like the finger of a glove, which it continues to push down before it as it descends, so as to be completely covered by it in the cavity of the scrotum, thus in speaking of an internal ring, we speak of that which we have never seen, unless it so be that we have previously made it by the use of the knife, by cutting away the process of the fascia, this fascia forms a part of the posterior boundry of the oblique canal and also assists in strengthing the parts so as to prevent hernia by the direct descent

Fascia propria is a membrane very similar to the former membrane, and like it lines the whole of the abdominal cavity

and is situated between the transversalis fascia and the peritoneum. this fascia is found to have the same relations with hernia that the former has, and like it serves to strengthen the parts it also sends of a process which envelopes the chord and testicle Peritoneum is a third membrane lining the abdominal cavity it is much more extensive than the two former, for besides lining the cavity it is reflected so as to form a covering for the viscera contained within the cavity of the abdomen and it furnishes a support by which the viscera are retained in their natural situation, and from its adhesion to the testicle wee find it also descending into the cavity of the scrotum, the body of the testicle being in the foetus within the cavity of the abdomen and behind the peritoneum this membrane becomes attached to it, and as the parts gradually become developed and the time for the descent of the testicle has arrived wee find that this body begins to descend either by the power of nature or or by the action of the gubernaculum of hunter (the first of which I deem amply sufficient for the purpose) this body as it descends and comes to the part at which it is to escape from the abdomen, wee find that it is resisted by the fascia propria

and the fascia transversalis, but as this is an effort of nature we we need not suppose the resistance great, but that the parts soon become relaxed and that the testicle carries down before it these two membranes which form a complete envelope for it in the cavity of the scrotum as the testicle is situated behind the peritoneum in the cavity of the abdomen, it is also situated without this membrane in the cavity of the scrotum, and I addopt this opinion from the manner in which the testicle descends, when the time for this process has arrived the testicle and the part through it is to pass are situated very near each other, and this body instead of folding over and carrying two fold of peritoneum before it. it slides down under the membrane untill it gets to the outlet and then it descends drawing down the peritoneum after it, so that we have the portion of the membrane that was attatched to it in the abdomen still adhering and the portion that must necessarially be reflected forms the tunica vaginalis, the communication between the tunica vaginalis and the cavity of the abdomen frequently remains open for sometime after the descent of the testicle and through this opening the intestines are liable to descend giving rise to congenital hernia at the time when the testicle descends the obligue canal is

not formed so that the testicle passes through the two openings directly opposite each other, but as the parts become more developed the internal membranes gradually gradually extend towards the illium carrying the chord before them, so that we find at the time of full developement that there is a canal formed, from an inch ~~to an inch~~ to an inch and half in length, the axis of which is upwards and outwards this canal called the obliquus is bounded anteriorly by the tendon of the obliquus muscle, inferiorly and outwardly by poupards ligament, internally by the transversalis fascia, and tendon of the internal obliquus muscle, superiorly by the internal obliquus and transversalis muscles

Epigastric Artery this is an artery of considerable size most commonly taking its origin from the internal side of the external illiac artery a little above poupards ligament, but it is not always thus regular in its origin, meckel speaks of its ~~coming~~ of from the common or deep crural artery, of others in which it arises by a common trunk with the obturator, when it comes of from the illiac it does not always arise at the same place, but sometimes higher and sometimes lower, so that the place where it rises varies to the extent of two inches, but wherever it may take its origin it pursues in general pretty the same course, if it comes of above the ligament it takes a turn downwards so as to pass under

and behind the chord and if it arises below the chord it passes upwards and assumes the same position, so that we always have the artery on the internal side of the chord, the artery after passing round the chord takes a turn and ascends upon the posterior face of the rectus muscle near the place of the curve it sends of a small branch which divides into two others one goes downwards and backwards and ramifies with the iliac artery, the other goes inwards along the horizontal branch of the pubes and ramifies with its fellow of the opposite side, it also sends off a branch which goes to the chord, the artery will be on the outside of the tumour in hernia by the direct descent so that we should be in danger of wounding the artery by cutting outwards, and it will be on the inside in the oblique hernia so that we must not make the incision inwards there is another small artery which comes of from the iliac most commonly about the place where it is passing under pouparts ligament this artery is about half the size of the epigastric, it is situated between the external face ~~of the external face~~ of the external oblique muscle, and the skin, it will be on the outside of the tumour in oblique hernia, and will consequently be in danger of being cut in an operation by making the incision outwards

having described the anatomy of the parts concerned in inguinal hernia, it now becomes necessary to speak of the parts at which at which a protrusion may take place, and of these there are two the first of these is that at which the chord makes its escape from the cavity of the abdomen, this is called the oblique or indirect inguinal hernia, the second is that which occurs in consequence of the rupture of the posterior boundary of the oblique canal, in which the epigastric artery will be situated on the outside of the neck of the tumour

Oblique inguinal hernia is perhaps by far the most frequent variety of hernia, and it may be define a tumour arising from the protrusion of a portion of the intestine or some of the other viscera contained within the cavity of the abdomen, through that canal or opening by which the chord makes its escape from the cavity of the abdomen, this variety of hernia is differently named and has different relations according to the parts which it occupies

Bubonocele is characterized when not strangulated, by the tumour being in the oblique canal, and not having passed through the external ring by the diminution or total disappearance of the tumour when the patient lays on his back, and by its recurrence when he stands up

and by the impulse which is felt in the tumour when he coughs it generally diminishes in size when the patient holds his breath, and disappears entirely by means of pressure, it is larger and more tense after taking a full meal, or when the patient is troubled with flatus, and soft and small in the morning before taking food, and it will be generally attended by colicy pains, when made up of intestine alone it is soft and elastic and will generally disappear with a gurgling sound upon pressure and will suddenly recur when the pressure is removed, when the omentum forms the tumour it will feel knotty and is less likely to recede upon pressure, and will not so soon recur when the pressure is removed, the protruded parts while in this situation is above and to the outer side of the chord, and its coverings are the skin, the superficial fascia, the tendon of the external oblique, the fascia transversalis, and the fascia propria, and peritoneum, when it passes out at the external ring and descends into the scrotum, it takes the name of oscheocele or scrotal hernia, when in this situation it becomes much enlarged, but has nearly the same coverings that it had while in the canal, and is attended by nearly the same symptoms, the sac in its descent keeps to the outer and fore part of

the chord

sometimes after the protrusion has commenced at the upper part of the canal and began to proceed downwards, the tumour from some cause gets over and behind the chord. cases of this kind are of very rare occurance, and when they do occur there is some difficulty in distinguishing them from hernia by the direct descent

Direct or ventro inguinal hernia is that which protrudes nearer the pubes than the one just described, descending from the abdomen immediately behind the external ring having the epigastric artery on the outside, it is generally produced by external violence rupturing the tendons of the muscles and sometimes the transversalis fascia, this variety is of more sudden occurance than the obligue and the neck of the sac assumes a different position, the tumour in its descent gets down behind the chord so as to have it on its fore and outer part, and the neck of the sac will generally be nearer the the symphysis and it does not take the obligue turn that is observed in the indirect, the coverings of the direct are the common integaments, the superficial fascia, the fascia transversalis if it is not ruptured, the fascia propria, and the peritoneum

Congenital hernia is an other variety of inguinal hernia which differs from the others in consequence of the protruded

viscus being situated in the tunica vaginalis which in this case becomes the herniary sac, the origin of this variety of hernia is owing to the following circumstances, the testicle being in the foetus as before described situated in the lumbar regions, below the kidneys, and behind the peritoneum, having this membrane attatched to it, so that as it descends the peritoneum is drawn down after it now when it has arrived at the opening of the abdominal rings which at this time are directly opposite it passes out and having the peritoneum attatched, as it descends it must necessarially draw this membrane down after it, and thus we have it reflected from the testicle at each side, and the reflected portion is continuous with that portion lining the abdomen, so as to leave a sac communicating with the cavity of the of the peritoneum, the neck of which usually becomes closed soon after the descent of the testicle sometimes however the complete closure of the opening is delayed untill sometime after birth, in which case if any portion of the bowel be forced into it they become of course an impediment so long as they remain unreduced to the further obliteration of the opening the relations of this variety of hernia are the same as those of the oblique except that is has the tunica vaginalis for its covering, the symptoms

by which this variety of hernia is characterized from the others is not very apparent, but if we should see a patient who has been afflicted with hernia from the time of birth or soon after, we might reasonably suppose that it was of this variety, it would assume somewhat the position of the direct inguinal in its descent, but it would have the chord more directly behind, and the artery on its inner side

There are disease which sometimes occur about the groin with which hernia is very liable to be confounded, and some in which the most eminent surgeons have been deceived in regard to their diagnosis, but there are generally symptoms by which we may distinguish hernia from other diseases, among the diagnostic symptoms the following may be enumerated, in hernia the tumour first appears at the upper part of the inguinal canal, and descends gradually, but sometimes it is sudden in its descent, it usually disappears when the patient is in a recumbent posture, and protrudes again when the patient is erect, it dilates upon coughing, and upon any exertion of the abdominal muscles, when the tumour is made up of intestine it feels soft and elastic, seems as if filled with air, and will disappear with a gurgling noise upon pressure, and will generally suddenly reappear when the pressure is removed, when the omentum forms a part of the tumour

it feels knotty and will not so readily recede upon pressure, nor will it so readily recur when the pressure is removed

The symptoms by which hernia is distinguished from other diseases in the groin are the following, from hydrocele it may be distinguished by this disease commencing in the lower part of the scrotum and ascending as it increases, while in hernia the tumour begins in the inguinal canal and descends, as the tumour increases the chord is with difficulty traced, hydrocele is also distinguished by its pyriform shape; by its fluctuation, and by its transparency, there is no dilatation upon coughing except in cases in which the hydrocele rises to the upper part of the scrotum, and in cases of this kind the only means of distinction is the history of the case, its transparency and its fluctuation, it sometimes happens in consequence of the tunica vaginalis remaining open that the water of an hydrocele has free communication with the cavity of the abdomen, or the water of ascites from ready passage to the tunica vaginalis, so that when he is erect the tumour will appear and when recumbent it will disappear the principal symptoms by which this is distinguished from is its transparency, the weight of the tumour, and the sensation communicated to the hand while returning it into the abdomen

Hematocele is perhaps more liable to be confounded with hernia than is hydrocele, having more fullness, and being more in the shape of a hernia protrusion, but by its being generally preceded by a blow and the redness of the skin, which it is generally accompained, not being affected by coughing and the swelling being more circumscribed and not disappearing when the patient is in the recumbent position are perhaps sufficient signs to distinguish it from rupture From inflamed testicle it is generally quite easyly distinguished by enquiring into the history of the swelling by the tenderness of the tumour and by there being no dilatation upon coughing and by our not being able to press the tumour into the abdomen are perhaps sufficient marks to distinguish the two diseases Varicocele is a disease that is perhaps more frequently than any other confounded with inguinal hernia, this is not an unfrequent disease if the spermatic veins be much enlarged they dilate upon coughing, the tumour appears when in the erect posture and disappears when in the recumbent posture, the swelling has a ropy feel as if their was a bundle of small chords in the scrotum (or a bag of worms) the best method of obtaining a certain diagnosis, is to direct the patient to lay down, and then to

empty the sac of its contents, and then to apply the finger to the exter
nal abdominal ring = and direct the patient to rise, if it be hernia
the tumour will not recur so long as the finger is held upon the ring
but if varicocele it will return with increased size while in this situation
causes, the abdomen considered as a whole, while in the state of health has
two opposite forces in action which counterbalance each other one
is the force of the viscera against the abdominal walls, the other the
reaction of the abdominal walls against the viscera, if in all indi
viduals and in all conditions of life, the two forces are equal
hernia could not take place, but from an unequal distribution
of the force, and from the natural weakness of some parts more,
we find that there is a constant tendency of some of the viscera
to protrude from the abdominal cavity, and as the cavity is com
pletely filled and the walls acting in all directions we are naturally
to expect the protrusion to take place at the weakest part, the parts
that furnish the least resistance to the pressure are those situated
between the spine of the illium and the pubes, it is here that the
great vessels and spermatic chord pass out from the cavity of the ab
domen, and by the arrangement for their transmission the parts
are necessarily weakened, and in addition to this there is the

pressure of the viscera upon these parts, which by their continual propulsive will readily insinuate themselves into any opening that may be left by the passage of the vessels and chord from the abdo-men, there is some cases in which the abdominal ring is preter naturally large, and this becomes a fruitful source of hernia others in which the tunica vaginalis remains open, patients who become suddenly emaciated after having been very corpulent hernia occurs from slight causes, women that have born children are more liable to the disease than other females, and individuals that carry heavy burthens, play on wind instruments, or that rece-ive violent contusions of the abdomen are also liable to hernia Hernia will be found to exist in one of three states 1 Reducible or that in which the patient can generally return the tumour at pleasure, 2 irreducible is that in which on some account or other the tumour cannot be returned into its natural situation, this state may arise from several causes, after the parts have become protruded lymph may be thrown out and adhesions formed to the surrounding parts, or there may be membranous bands formed across the sac by adhesion, or the parts may become enlarged. the omentum may become entangled in the intestine, or a portion of intestine and

and omentum may be suddenly protruded of such a size that it cannot be returned, & strangulated this is that condition in which some portion of the protruded mass becomes so constricted that violent inflamation and gangreen is the consequence

Reducible hernia although of the mildest form is not without danger, for in cases of this kind the tumour is gradually on the increase and is liable to form adhesions to the surrounding parts and thus to become irreducible, and also from any violent exertion, a sudden fall, costiveness, or an accumulation of feces in the protruded portion of intestine, it is liable to become strangulated,

To prevent these accidents it is necessary that we should very early resort to measures in order that after the parts are replaced they may be retained in their natural cavity and the opening in the abdominal parietes through which they passed may be allowed to close; this is the termination for which we would wish, but we very often have the mortification to find that our wishes are not realized, for in all cases that have been of long standing, or in old subjects they will seldom ever become closed, but in young and healthful patients we may entertain a hope that by the long continued use of a truss that the opening will finally become closed, the great object

in the selection of a truss is that we obtain one that will make sufficient pressure upon the parts and none too much, if we apply a truss the spring of which is not sufficiently strong to resist the pressure made by the hernia we shall not obtain the object for which it was applied, but the protrusion will recur and then the truss still remaining on will become a cause that may produce strangulation, but if we employ one the spring of which is to strong the pressure that it will produce upon the part will be so great as to prevent the free circulation, and thus prevent the deposition of the nutritious particles, while the absorbents still continues to act, the parts that lay immediately under the truss will gradually be removed and instead of the opening becoming closed as we expected it will gradually become larger and the hernia be of more easy descent and larger than it was previous to the application of the truss

Irreducible hernia, the dangers of this variety of hernia are very great in consequence of the difficulty of returning it into the cavity of the abdomen, it being in constant danger of becoming strangulated, and from its exposed situation it is very liable to be ruptured by blows or falls and in large hernia from the sunken state of the penis at the upper part of the tumour, the bone part

of the scrotum becomes excoriated in consequence of the dribbling of the urine over it, and this in cases of long standing become the cause of abscess and sometimes sloughing of the scrotum
The means that we are to addopt in the treatment of this variety of hernia are such as will gently support the parts, this may be done by means of a bag in which the scrotum is to be enclosed and thro by means of tapes it must be attached to some part of the body so to support the weight of the tumour by these means we in some measure remove the tendency which the tumour has to increase in size, but we should not abandon our efforts at reduction to soon for in many cases in which the hernia has been supposed to be irreducible by perseverance in the proper means such as the taxis and cold applications the tumour has disappeared contrary to expectation
There is another condition of hernia which sometimes occurs in consequence of the accumulation of feces in the protruded bowel denominated engorgement, it is of most frequent occurance in large hernia and depends upon the difficulty with which the contents of the protruded bowel ascend so as to get into the other portion of the tube, in consequence of the tardiness thus produced in their motion they accumulate in the protruded portion, and thus

produce obstruction and prevent the free circulation of blood in the part, the contents of the intestine continuing to increase between the obstructed portion and the stomach, and the size of the tumour continuing to increase, being at first indolent and soft, not elastic and painfull as in cases of strangulation, this differs from strangulated hernia in as it may continue for several days without producing any very alarming symptoms, at length however from the fecalent matter continuing to accumulate in the tumour it becomes of very large size and painfull the abdomen becomes tense, and the whole system soon become affected which is manifest from the nausea and vomiting which comes on, first of the contents of the stomach, and afterwards of the contents of the intestinal canal, and also by the hard and quickened pulse, this stage approaches very near to strangulation, but according to scarpa it may continue for several days or even weeks without putting a period to life while on the contrary the bowel when strangulated, immediately inflames and sometimes becomes gangrenous in four and twenty hours
the measures to be resorted to for the purpose of relieving this variety of hernia, are brisk cathartics, purgative enemi, the application of cold to the part, and the taxis, by the use of these means if attentively persisted in we shall in general be able to relieve the symptoms

and as it is not in general attended by immediate danger we may continue the use of these means for sometime, and if they do not give relief and the symptoms get worse we must resort to the knife

Strangulated hernia is defined by Sir Astley Cooper to be a protrusion into the herniary sac, which cannot be returned into the abdomen and in which the pressure is so great as to prevent the free circulation of blood through the protruded viscera

The symptoms which characterize it are a pain not only in the tumour but in the stomach and all over the belly, sickness and inclination to vomit, suppression of stools, and some degree of fever. there is sometimes a frequent desire to stool, but the patient only passes a small quantity of feces from the large intestines, the tumour feels hard and if made up of intestine feels tender to the touch, there is violent vomiting first of the contents of the stomach and afterwards those of the bowels down to the stricture, the abdomen is tense, there is great anxiety and restlessness, with a small quick and hard pulse, cold extremities. if these symptoms continue long the abdomen becomes extremely tender to the touch, the pulse becomes very small thready, and frequent, hiccough comes on, the respiration is weak, and the whole surface of the body is covered by a

cold clammy sweat, after these symptoms have continued for a longer or shorter time they terminate in symptoms denoting the occurance of gangreene; when this occurs the patient suddenly becomes easy, the swelling of the belly suddenly subsides, the tumour diminishes, and the skin covering it sometimes changes its natural colour for a livid hue, it has an emphysematous feel, and crepitous to the touch this crepitous is a sure indication of gangreenous mischief within in this state the gut goes up either spontaneously or by the slightest pressure, a discharge is made by stool, and the patient fancies himself better, this feeling however is of short duration, for the hiccough and cold sweats still continue and increase with the addition of convulsive symptoms death soon follows Tho when we reflect upon the symptoms that has just been enumerated it is scarcely necessary for me to add that the measures to we resort for relief must be prompt and energetic, the condition of the patient demands our whole attention and the utmost of our skill, it is to the measures we addopt and the manner in which we execute those measures that the patient owes his life we must keep in view the danger to which he is exposed ~~that~~ that there may be no time unnecessarily lost in the employiment

of ineffectual means. the means that have been addopted for the relief of strangulated hernia are the following
The taxis or the reduction of the hernial contents by the hand ought to constitute the primary object of the surgeon when called to to a case of strangulated hernia, in order that we may employ this with the greatest probability of success it will be necessary to take into consideration the relations of the tumour with the parts through which it passes, and also of the general anatomy of the parts, so that we may be able to judge of the best position for the patient while we attempt the reduction by the taxis, the most convenient position in which we can place the patient is upon his back with his shoulders somewhat elevated his knees drawn up and placed a little towards the opposite side, by this position we relax all the parts that may be concerned in the production of the mischief, such as the abdominal muscles, poupart's ligament, and the fascia of the thigh, to such an extent that we can sometimes return the protruded mass without subjecting the patient to the horrors of an operation, in using the taxis it is necessary to recollect the situation of the external ring, which is just above the pubes and from half to an inch

from the median line, and it is also necessary to recollect the direction of the oblique canal which is obliquely upwards and outwards, and in the use of the taxis we must make steady pressure upon the parts in the direction of the canal; but not with sufficient force to produce any danger of rupturing the gut, it sometimes happens this ~~this~~ measure fails, and then it becomes necessary that we should resort to other means, and of the various means that have been employed bloodletting according to the testimony of the best authors ranks next in importance, this is perhaps one of the most important indications at this period of the disease; for besides the little time that is consumed in trying its effects, it serves the double purpose of relaxing the system, and of counteracting inflamation when we have bled the patient freely, we must again resort to the taxis, but if their is no better success than in the first trial we must resort to other means provided the condition of the patients will permit an operation to be longer delayed, if the patients strength is yet considerable and there being no cause to fear the occurance of gangreen in the part, we may try the effects of the warm bath if one can be speedily provided, although this is often attended with success we must be very carefull not to

let too much time be wasted in the preparation of the bath, indeed we should always have it prepared during the use of other means, so that if it becomes necessary to use it, it will be ready, if after the employment of these means the symptoms continue with unabated violence, we may then resort to the use of tobacco, this may be employed in several ways, it may be applied to the tumour, it may be given in the form of smoke, and also in the form of an injection a drachm being simered for ten minutes in a pint of water, the liquor being strained one half should be injected at first, and soon after the other half unless the effects of the first appear to violent

If after the employiment of these various means we are still unable to return the protruded mass into the abdomen, we must not waste to much to much time in the employiment of those measures, which to say the most of them are uncertain remedies, and by trusting to them and delaying the operation, the patient may sink into such a state of weakness and debilety, that no means will be able to restore health being aware of the dangers to which the patient is exposed, and of the almost certain result of our delay, we should as soon as the urgency of the symptoms demand inform the patient and his friends of the necessity of an operation

In the performance of this operation the patient should be placed upon a table of sufficient heigth, upon his back, with his shoulders somewhat elevated, and the thighs a little flexed towards the body so as to relax the abdominal muscles, before proceeding to the operation the hairs should be shaved from the parts, and we should direct the patient to evacuate his bladder, having taken these necessary precautions the surgeon should now place himself between the thighs of the patient, and grasp the tumour with his left hand so as to put the integaments covering it upon the stretch, and then having the scalpel in the right hand, he should commence the operation by making an incision through the skin, on the anterior part of the swelling the incision should commence a little above the external ring and if the tumour be not very large it should extend to near its lower part, and be carried over the middle of the tumour, in this cut we should divide the skin and adipose matter, and the external pudic artery is also divided, this sometimes gives rise to considerable hemorrhage but it is always easily stopt by pressure having completed the first incision which brings us down upon the fascia superficialis, we must proceed with great caution, using a pair of dissecting forceps we are to raise a portion of fascia

and with the scalpel nick a small hole in it, we are then to introduce a groove director, on which the surgeon is to divide the fascia upwards to the abdominal ring, and downwards to the end of the first incision after having divided the superficial fascia we are to proceed in the same manner to the division of the other fascia which are the cremasteric, transversalis, and fascia propria, these fascia are sometimes so connected together that it is very difficult to distinguish them in cases of this kind we must be very cautious least we should get into the sac unawares and do injury to the gut, after we have divided these fascia and got down to the hernial sac we are to proceed with still more caution in dividing the sac, we are first to take hold of the sac with our fingers so that we may remove any portion of intestine that might be in danger of being wounded, and then we must seize it with the forceps and make a small cut in it so as to introduce a director and upon this the sac is to be divided up to near the external ring and down as far as the external opening, we shall be informed of our entrance into the sac by the discharge of a small quantity fluid, which in case where the strictune has not existed long has a serous appearance, but it will more generally

be found of a dark color and sometimes of an offensive smell this fluid is most abundant in intestinal hernia and is in proportion to the bulk of intestine strangulated

after having exposed and divided the sac we are next to search for the seat of the stricture, which will be found at the internal ring at the neck of the sac, at the external ring — and according to situatty except in the inguinal canal, but I think that a stricture here must be of very rare occurance

When the stricture exists at the internal ring which is the most common place, it is occasioned by the pressure of the internal oblique and transversalis muscle upon the mouth of the sac, when the surgeon has found after examination that the internal ring is the place of stricture he is to hook the tip of his nail under the margen that produces ~~that pressure~~ the stricture, he is then to pass the knife for dividing upon the finger untill he can insert it under the margen of the parts producing stricture, and after we have got it introduced under the stricture being careful that the intestine does not get turned over the edge of the edge of the knife, we are to turn its edge its edge towards the tense margin, and to give it a slight push directly

upwards so as to cut a few of those fibers that produce the stricture and dilate the opening sufficient for the returne of the gut. the stricture having been removed the next object is to returne the protruded parts into the cavity of the abdomen, unless they should be found in a gangrenous state, in the reduction we should always return that portion first that is nearest the opening some times the protruded parts will be adherant to the surrounding parts, when this is the case if the adhesions are loose we may divide them and reduce the hernia, but sometimes the adhesions are so firm that there is danger of wounding the gut in attempting to destroy them, it was therefore recommended by Scarpa merely to remove the stricture, and not attempt to destroy the adhesions nor to reduce the hernia

If the stricture should be found to exist at the external ring we should proceed with the same precautions in dividing the fascia and exposing the sacs as has been previously discribed when the stricture is found to exist at the external ring whether of the oblique or direct inguinal hernia we should divide the stricture directly upwards

should the intestine be in a gangrenous state it will have

a fœtid smell, the peritoneal surface will have lost its brilliancy and be of a dark port wine color with greenish spots on it, it will not possess any sensibility and will easily give way under under slight pressure

Under these circumstances the question seems to be disputed whether we should divide the stricture or not, but it appears that since the intestine is already dead, and that the only object of the operation is to give relief to the strangulated gut, that the object for which we would perform the operation no longer exists the swelling which was before tense and elastic, now becomes soft, doughy, and emphysematous, and of a purple colour, and sometimes the tumour returns spontaneously into the abdomen showing that the stricture no longer exists, and that consequently there is no capacity for an operation, there are cases related by sir astly cooper in which the skin covering the tumour sloughed the intestine gave way and the feces being discharged at the wound the symptoms of strangulation soon ceased, in case of this kind the intestine becomes adherent to the hernial sac the sloughs are thrown off and an artificial anus is established through which the feces is sometimes discharged for the remain

der of life, although this is the result of most cases in which mor tification takes place, yet there are some case in which the feces re sume their natural course to the rectum

The danger of an artificial anus arises principally from the portion of the canal that may be the seat of the disease if it be the upper portion of the jejunum it must almost necessarily prove fatal in consequence of their not being a sufficient extent of the mucous mem brane between the seat of the disease and the stomach to allow of the absorption of the nutritious matter, but if the injury be seated in the lower portion of the canal, as in the colon or ileon the patient may live, when the surgeon is called to a case in which gangreen has taken place there is but little for the surgeon to do, some have recommended to draw out the gut and to take of the gangrenous portion and then to unite the two ends by means of sutures, but as we are to suppose that slight adhesions have already taken place internal to the place of stricture, and that in doing this we counteract the efforts of nature, either to establish an artificial anus or to restore the natural passage, therefore the one that does least in cases of this kind perhaps does best

An
Inaugural dissertation
on
Milk Sickness

Submitted to the examination
of the Provost Trustees
and Medical Faculty
of the
University of Maryland
by

A W Osborn
of N. Carolina

March
1834.

To

E. Geddings M.D.

Professor of Anatomy & Physiology

in the University of Maryland,

This dissertation is respectfully dedicated

as a testimony of respect for

his Professional eminence, and

Private worth. by

his friend & pupil

The Author

Milk-Sickness is a disease which has prevailed in the western part of North Carolina since my earliest recollection; indeed this affection has been common to this part of the country, ever since it has been inhabited by civilized man, and while I attempt to give the history of this strange, as well as fatal malady, I shall confine myself to treat of it, as it has occured under my own observation.

In the first place it is my design to explain, so far as my ability will allow me, the disease, as it occurs in inferior animals.

In the second place, I shall endeavour to remove some of those obstructions which intercept the discovery of the cause giving rise to the disease; the remarks which I shall offer on this part of the subject must be considered as mere hypothesis, inasmuch as I conceive it to be quite as mysterious, and probably more difficult of solution, than is the much contested subject of Malaria.

I have no doubt if this disease were to come under the general investigation of the medical profession, it would give rise, equally to as much controversy, and discrepancy of opinion, as the former, but unfortunately it is a subject which has attracted very little attention from the medical profession, far less than its prevalence and fatality justly entitle it to.
However, it has occurred heretofore in the more obscure parts of the country, where men of science have rarely had an opportunity of seeing this affection, either in man, or the inferior animals; I have often wished for ability equal to my zeal to investigate this subject, but however sad my conviction of my own incompetency to do justice to a subject, involving so much the happiness and safety of those exposed to its consequences — it has been equally as much my misfortune to be compelled to rely upon my own judgement in the treatment of a number of cases which occured in my practice.

In the third place, I shall describe the manner in which it is communicated to man, and at the same time give its Methodus Medendi.
It is in all instances, where it occurs in Man, taken into the system through the medium of the beef, butter, cheese, or any other animal matter, previously affected with this poison.
Lastly, I shall speak of the treatment in a concise manner.
In the summer and autumnal months, this disease is most prevalent, and if herds of cattle are permitted to range where this poison exists, great numbers of them have been known to fall victims to its fatal effects; any of the herbivorous animals are liable to attacks of this disease the deer which animal I think is least susceptible of poisoning from vegetables, is not unfrequently destroyed by this disease; this animal I have seen to eat the Conium Maculatum with impunity, without sustaining

the least apparent injury from it, but under the deleterious influence of the former, it frequently falls an easy prey to the huntsman in the vicinage of those localities where the cause of this disease is known to exist; indeed, it is customary with those gentlemen who are in the habit of taking this animal, to judge whether or not, it labours under the influence of the poison, by the greater, or less difficulty, with which they take it; if it sustain the chase but a short time, the animal is but too justly suspected of labouring under the disease, as sad experience has proved to those that have taken their repast from the flesh of this Animal.

The cause which gives rise to the disease denominated Milk-Sickness is no doubt of higher grade than any of the ordinary vegetables with which we are acquainted.

The first symptoms observed in those animals affected with Milk-Sickness is a disinclination

to move, or exercise, in any way, it becomes exceedingly feeble, and when standing althears to have lost almost entirely its nervous energy; I have observed animals thus affected to stand for hours in the same place, trembling as if from fear, and when drove from this apparently fixed position, it falls exhausted to the ground; the ox is not observed to ruminate when under the influence of this affection, lingers a few days, and expires; it rarely survives until it becomes emaciated, if this takes place, it is apt to recover; the disease is not unfrequently brought into action by driving the animal predisposed so as to produce a great degree of vascular excitement, by this, the most common, and formidable exciting cause, the animal falls a speedy victim to the poison, which has, perhaps, been lurking for weeks or even months in its system.

Farmers, not unfrequently meet with a considerable loss of stock, in consequence of the predis-

position to this affection, previous to the excitement produced by driving them, when the disease is brought into action by this cause, it proves speedily fatal; this is considered by those who know their stock has been exposed to the cause, as sufficient test of the health of the animals, if they sustain the consequent excitement of the chase without producing symptoms of the disease, there is no scruple in using the beef; it is true, the animal might die of excessive excitement alone, independent of any other previous affection; but I would ask if the flesh of animals dying from this cause would prove so extremely deleterious, as does the flesh of those which are known to die of Milk-Sickness; the flesh of animals can not be rendered noxious in this way, in fact animals which have died of this poison, generally proves, incontestibly, the cause and nature of their death by spredding disease

and death among those carnivorous tribes, which devour its carcase; dogs, wolves, foxes, carrion crows, or any other beast or bird which may feed upon the poisoned flesh, die of this disease; these die in astonishing numbers in some instances, particularly, where a number of cattle have died of this affection in the same neighbourhood, which circumstance not unfrequently occurs, and hence supplies these carnivorous animals with a lasting opportunity of satiating their rapacious appetites, which however does not require in many instances more than one dose of this deleterious flesh, to put a period to their existence; however, the disease in these animals, like in that of the herbivorous is not invariably fatal, but assumes a greater or less degree of violence, according, as their susceptibility may be, or the quantum of poison which may have been taken: there is a peculiar circumstance connected with the effect of this

strange poison, which I deem worthy of relation in this place; that is, the virulence of this disease is of comparatively rare occurrence in animals, while secreting milk, but persons, or any animals using the milk of those exposed to the cause which gives rise to this disease, are often affected with it, and in fact, this is the most fatal source of the complaint among the human family. We may readily conceive how this poison may insinuate itself into the systems of those who make a daily repast of this article, not having the least reason to doubt the health of the animal in which it is secreted, until the disease makes its appearance in the system of the calf, or persons thus exposed without possessing the means of defence with which the cow is supplied, throwing off as she does, or rather, the system while performing the function of secretion, is capable by the

greater affinity of this secretion over that of the other fluids of the animal system for this peculiar and unknown poison, otherwise it would be accumulated in the mass of vital circulating fluid, and thus destroy the milch cow as it does other animals; I have seen whole families labouring under the deleterious influence of this distressing poison, at the same time, in consequence of having previously used the milk, or some of its preparations of those animals allowed to graze in the infected district; the calf, not unfrequently will in like manner sicken and die of the disease, and further to substantiate the nature and cause of its death, carnivorous animals devouring its carcase also sicken and frequently die of this disease, and thus remove every doubt from the mind of the most prejudiced.

I will here mention a case which occurred in my practice; I was sent for to visit Mr Howell's

family, who lived twenty-five miles from where I resided, on my arrival, the scene was distressing, the whole family were sick, with the exception of one, who had been absent for some time previous to their attack, and each affected in the same manner, in fact, so far as I was capable of judging, the symptoms were simultaneous this circumstance led me to inquire what their diet had been composed of previous to their attack, they mentioned several articles, among which, was milk, in fact so distressing was the sickness and vomiting it could scarcely have been worse if the patients had been labouring under the influence of a fatal dose of tartarized antimony; suspecting as I did the cause, I was induced to examine the calves, which soon put every doubt to rest, for after having chased them so as to produce excitement, they were also found to be labouring under the disease, of which some of them afterwards died, and further to substantiate the cause, dogs which

devoured the carcase, also died of the disease. I accordingly put the patients upon my usual mode of treatment for this disease, and in a few days, I had the gratification of seeing my patients considerably relieved, and finally recovered; the cow in which the milk was secreted in this instance, and this secretion, the vehicle through which the poison was communicated to the family, did not exhibit any signs of the disease; when the secretion of milk is suspended, this animal is as liable to an attack of the disease as animals under any other circumstance: I mention the above, to show the fair opportunity we have of discovering the cause of the disease, by analyzing the milk, we know the poison exists in the milk, in a state capable of communicating the disease to animals feeding on this article, without the animal in whom it is secreted, suffering from its deleterious influence.

It is not in my power to enumerate all the peculiarities of this malady within the limits of this paper; taking every circumstance into consideration, I am inclined to think the cause of Milk-Sickness emanates from some other source than any particular vegetable poison, in fact were I to venture my own Hypothesis on the subject as to the cause giving rise to this disease I should give vegetation some share in communicating the disease to herbivorous animals, but not from any specific poison which it possesses; in a word, I am of opinion that the cause of this disease is contained in the earth, in those infected spots and may be communicated to animals through the vegetation growing on such locality, the cause may remain latent in the system of animals for weeks or even months, during which time it may appear perfectly healthy, and ultimately fall a victim to the disease; this circumstance

I have known occur in a number of instances after the animals had been removed far from the source of the disease.

With regard to the post-mortem appearances which be found in the Ox that has died of Milk-sickness, on opening the abdomen, appearances of Inflammation are found extending to the peritoneal coat of the intestines, and stomach; on cutting open the stomach, the aliment is found in a dry state and as it were closely impacted in the numerous follicles of that organ; although the inflammatory appearance extends throughout the canal, the above phenomenon is not observed in any other portion of it.

As I before observed, this disease is communicated to the human being through the medium of the beef, butter, cheese or any other preparation of food from those animals affected with the disease, it would be proper here

to remark, it is not necessary the animal should exhibit symptoms of the disease, in order to communicate it to others, such animal, may apparently enjoy good health, yet communicate disease and death to those who may subsequently use the beef or milk; the first deviations from health observed in those persons affected with Milk-Sickness, are languor, weakness of the knees, disinclination to exercise, appetite is generally impaired, with a white and clammy tongue, the patient may complain of these symptoms several days, without exhibiting any material change; however, the more formidable symptoms may be ushered in suddenly, that is, nausea, vomiting, great prostration, the thirst of the patient is great, and any attempt to satiate it is a source of continued irritation, and thus the patient augments, or at least keeps up the vomiting, the tongue now assumes a red and clean surface, the pulse in the

onset of the disease is full, and somewhat accelerated, but this condition of the pulse is soon changed to that of a small and frequent character, the patient complains of pain, on pressure being made over the Epigastric region, the bowels are constipated, the skin, dry and hot, the eyes suffused with blood. the urine scanty and high-coloured, and I have noticed one deviation in this affection from our ordinary gastro-enteritic affections, that is, the encephalon appears to be almost the last organ which is deranged in Milk-Sickness, although I have witnessed a number of cases of this disease, in many of the instances, I have never seen delirium, or a reference to severe pain in the head, though the eyes would appear to indicate a determination of blood to that organ; if the disease is suffered to go on unobserved, the countenance becomes sunken, respiration hurried, the pulse feeble and frequent, abdomen swollen, with evident signs of approaching

mortification, which bids defiance to all remedial measures, and death speedily ensues.

In treating this disease our first object should be to arrest inflammatory action, and with a view to this, we may employ in the early stages of the disease general and topical bloodletting, if the state of the pulse forbids the use of the lancet we must resort to the local abstraction of blood, by the use of cups and leeches; blisters to the abdomen are also useful; under this treatment, the patient is enabled to retain a cathartic a sufficient length of time to produce an action on the bowels: we must generally resort to active cathartics in the first instance, for the costive state of the bowels is extremely difficult to overcome, after we have obtained free evacuations, it will generally suffice to give mild purgatives, so as to keep the bowels in a soluble state;

the action of a cathartic at first is materially aided by an enema containing a cathartic medicine, thrown into the bowels, such as the Sulphate of Magnesia, Oleum Ricini; I have seen the Oleum Terebinthinae produce the happiest effects.

In consequence of the great irritability of the stomach, it is extremely difficult for a purgative to be retained sufficiently long to produce catharsis. hence it becomes a matter of importance to select those, which form the smallest bulk, for this purpose I have found Calomel one of the best, we may employ Croton Oil also with satisfactory results; We must, at the same time prescribe the use of cold water, and substitute mucilaginous drinks, such as, gum arabica, slippery elm bark tea, barley water &c

After having arrested all those formidable symptoms which characterize this fearful

malady, the patient is generally pretty much prostrated, if the inflammatory symptoms have entirely subsided, we may aid the recuperative efforts of nature, by allowing the patient a mild tonic, a little wine, Acidum Aromaticum Sulphuricum, or any of the dilute mineral acids.

The patients diet should be composed of light farinaceous articles, arrow-root, tapioca, panada, rice, light soups &c; the patient while convalescing should avoid fatigue, as well as excess of diet.

If these few desultory remarks upon this novel subject, should lead to an investigation of it by scientific men, the writer will be highly gratified.

An Inaugural Dissertation On Pneumonia Biliosa

Respectfully submitted to the examination of the Trustees Provost and Medical Faculty of the University of Maryland For the degree of Doctor of Medicine

By

Basil Duke of Kentucky

March 3d 1834

To

Doctor Thomas H Bond Baltimore Co M.D.

Dear Sir

A sence of duty impells me to ascribe to you the first fruits of a course of studies commenced ~~under~~ and continued under your care and directions

For the high regard I entertain for your professional attainments and personal worth would be alone sufficient to make this duty imperative on me

~~Hoping you will~~ I beg dear Sir you will except this tribute of respect from your much obliged relative and pupil

Basil Duke

Pneumonia Biliosa

This diseas does not appear to have been mentioned by any of the ancient writers on the practice of Physic it has been altogether a subject of modern resursch and enqury — The term Bilious pneumonia has been given to this disease from the prominent symptoms of hepatic disorder whic it exhibits along with the ordinary pneumonia of pneumonic inflamation

This variety of pneumonia generally occurs durseing the cold and variable seasons of the year and in districts which abound in sources of miasmatic exhalation

This form of the disease appears to be more prevalent in the Eastern part of Kentucky than any other form of pneumonia and it appears to be the results of Keno miasmata

and atmospheric vecisitudes — The premonitory symptoms of this form of pneumonia appears to differ but little from those of the common and ordinary bilious remittant fever
In some instances a sence of fullness is felt in the right hypocondrum region a few day previous to the superventeon of the disease and occasionally dysenteric symptoms occur before the fever commences — In almost all cases considerable pain is felt in the head back and extrematies during the premonitary period — The face is flushed and a sickly mixture of red and yellow upon close examination betrays the exhistance of a disturbed liver (Dr Potter) — Acute pain in the forehead is almost constantly preasant — The pain in the chest is sometimes exceeamly severe and pungent but more commonly it is obuse and attended with a sense of weight and oppresion

in the breast - In some cases the fever continues for some days before the pectoral pains supervenes

The expectoration is not very copious, and the matter discharged appears to be of a frothy yellow colour; and streaks of blood are evidently to be seen in it - The fever in the morning is not so high generally as it is in the evening - Vomiting most generally occurs and when it does in this affection more or less of the bilious matter is generally thrown up: although in some instances the secretions of bile appear to be entirely suspended and the ejections appear to consist of nothing but gastric mucus

The tongue at the commencement of the disease is generally white and with

yellow streaks along middle and edges but as the disease advances it becomes dark brown and dry — The urin is always of a yellow or bilious colour — The pulse is generally small, quick and frequent with some degree of tension

Post Mortem appearances

The morbid structural changes produced in the lungs by inflamation; are —

First: Engorgement — The inflamed portion of the lungs exhibits externally a brown mottled or violet colour which forms a striking contras with the pale rose colour of the healthy part it is of a firmer texture and heavier than the healthy portion; and when pressed between the fingers the air cells will contain a conciderable portion of extravated fluid and when the

engorged portions are layed open with the knife a large portion or quality of frothy reddish serosity runs out and the internal structure exhibits a livid red appearance

Simple engorgements appear to be the results of the weakest grade of acute inflamation and may arise mechanically from mere sanguineous congestion during the last moments of life or in articulo mortis — To distinguish mere engorgement by extravated fluid from sanguineous congestion and engorgement from inflamation we must judge ~~more~~ less from the colour than from the degree of firmness of the pulmonary structure — In almost every instance arising from inflamation the substance of the lungs is rendered more or less friable

Second. Hepatisation presents at first sight the appearance and consistancy of the liver — In this variety of structural change; the lungs is impermeable by air and is entirely deprived of its crepitous feel under the fingers and sinks when put in water — When it is incised — a small quantity of reddish fluid issues without exhibiting any frothy appearance — If we examine the incised surface we perceive the lungs has lost its celular structure; the pulmonary substance exhibiting a red granulated appearance and on being pressed between the fingers is found to be readily broken down and reduced to a reddish pulp

Very When the lung is hepatecised its volume seems much greater than natural

but apparent enlargement is caused mainly by the diseased lung not colapsing
This morbid condition has been called red hepatisation
Third! Gray hepatization. This seems to be the result of a more intense degree of inflamation than which gives rise to red hepatization — In the present morbid condition the pulmonary structure is granular, condenced, and impermeable to air as in the preceding variety; but its colour is grayish or yellowish pale and when incised it discharges copiously an opaque yellowish or grayish fluid which is manifestly purulent and almost entirely without smell — In some case the pus does not issue spontaneously from the incised wound; but on pressing the tissue moderately small drops of

purulent fluid is forced out — In this variety of disorganisation, the pulmonary tissue is softened and readily converted into a grayish pulp by pressure between the fingers — Acute inflamation of the lungs never terminates in induration of its structure but this termination is common to chronic pulmonary inflamation This disease is said sometimes to terminate in gangrene but the cases on record of this kind are few in number

Owing to my inexperience in this as well as all other diseases, I have taken the liberty of commiting plagerism in my Post Mortem appearances; I have had no opportunity of making the examinations myself so I am compelled to put up with the facts stated by good & well authenticated writers on this subject

Deagnosis; The most important diagnostic signs between pleurisy and peripneumony are those obtained by percusion of the chest & and pressure made on the abdomen

In peripneumony percusion made with the ends of the fingers brought together in a line. produces an obtuse dull sound which is best estimated by comparing it with the sound produced on the healthy side of the chest — On the contrary, in pleurisy; no obvious difference can be detected in the sound produced by percusion on either side of the thorax

In peripneumony pressure made on the abdomen with both hands so as to make the diaphram come in contact with the lungs always excites coughing, great sufocation, and oppression; were as in no such symptoms result in pleurisy

Wonderful things have been said of the Stethoscope by the late writers on this subject; but as for my own part I am not much disposed to admit that it can give any satisfactory information of pectoral disease as it requires so much experience before the practitioner has a sufficient tact to employ it with advantage —

Treatment — In Pneumonias of all kind blood letting is the first and most important agent; the extent to which this remedy is to be carried must be decided by the strength of your patient and the violence of the pain; but the pulse of your patient is to be carefully attended to The blood should be drawn from the arm, from a large orifice and in such a quantity as to make a decide imp-

-pression on the system; and if in a few hours the pulse becomes hard and tense, with the recurrence of the pain; blood must be taken from the arm again, but not to the extent it was in the first instance

Almost in every instance great advantage is experienced by the application of cups on the chest. so I think the application of them should in no instance be neglected

The blood drawn in these affections exhibits a thick, sizy, or buffy coat, on the surface of a more or less cupped coagulum; and so long as the blood exhibits this appearance, bleeding may be regarded as a proper measure; but the disappearance of the buffy coat is not, however, to be concidered as a

certain indication that blood letting is no longer proper; for when the action of the pulse and the degree of pain in the chest, are such as to indicate the propriety of further abstraction of blood, bleeding may be confidently employed notwithstanding the absence of the buffy coat on the drawn blood

Emetics. Pneumonia Biliosa is the only variety of inflamation of the lungs in which emetics may be administered with advantage; some writers say that in the first stage of this disease the administration of a dose of Tart. Ant. will remove the pain in the chest; bring on a uniform Diaphoresis, and promote expectoration immediately. It usually brings up an abundance of bilious fluid from the stomach

Cathartics, should be concidered as one of our most useful curative means and Calomel is the one to be employed as its action is more specificlly upon the upper portion of the alimentary canal and liver. The bowels are then to be kept open with aperients such as castor oil or any of the neutral salts Cooling diaphoretics are very usefull auxiliary remedies in this affection. Nitrate of potash with minute portions of antimony, the pulvis antimonialis and the muriate of amonia are the best articles of this kind

Expectorants may be employed with advantage after the violence of the inflamation has been reduced by blood letting and the other remedies; but the benefits to be dem

-sived from this class of remedies is, upon the whole, much less considerable than might be inferred from the known salutary influence of a free expectoration in this affection

Blisters are among our most valuable means for inducing pneumonic inflamation As soon as the firmness and activity of the pulse have been reduced, a large vesicatory should be applyed over the affected side

An
Inaugural Dissertation
On
Acute Hepatitis
Respectfully Submitted to
the Examination of the
Trustees Provost and
Medical Faculty of the University
of
Maryland

For the degree of
Doctor of Medicine
By
John Turner
of
Maryland
March
1834

Acute Hepatitis.

Although not a very frequent disease in the temperate and colder latitudes, it is one of the most common diseases engendered by the influence of an intertropical or hot climate.
This form of Hepatitis often attacks very suddenly and hastens on with inconceivable rapidity to suppuration, especially when it prevails endemically, as along the Sandy Coast of Coromandel, and the marshy districts of Bengal. (as stated by Dr Ebule)
The peritoneum forming the capsule of the liver is liable to acute inflamation and we have the disease in this form very frequently. Dr Potter says that the peritoneal covering of the liver is seldom inflamed as a consequence of cold, like the other viscera.
Occasionally the disease extends from the pleura costalis to the covering of the liver, though but

seldom. The same distinguished Author says in cases of this disease the liver becomes inflamed secondarily.

When the disease attacks in intertropical or hot climates the patient is usually seized with pain in the right hypocondriac region accompanied with tightness across the abdomen; respiration becomes very difficult; the patient experiences great deal of pain when lying down, always experiencing less pain when sitting with the body inclined forwards.

Its attacks are very different in milder latitudes.

The patient complains in the first attack of the disease of a feeling of tightness in the right hypocondrium and Epigastric regions, attended with slight incipient febrile symptoms, those symptoms continue for a considerable time before the disease is fully developed.

The pain attending this disease of the liver frequently extend to parts far remote, particularly to the breast

the clavicle and shoulder of the right and somtimes the left side.

Mr Annesley observes that when the internal structure of the liver is affected the pain is heavy and aching but when the surfaces or ligaments become diseased, it is usually acute tensive and pungent. Lying on the left side almost invariably increases pain altho' in some instances it is the reverse, the patient only experiencing relief when on the left side.

A dry and troublesome cough, with difficult respiration are almost always characteristic of the disease. Nausea and bilious vomiting are frequent attendants in the disease and generally the severer these symptoms are the less we suffer from cough and difficult respiration.

A full inspiration does not always produce cough, though it invariably produces pain; and very generally this symptom does not appear untill the

second or third day of the disease.

In this manner and from the increase of pain by pressure we are able to distinguish this disease from pneumonia. Dr Louis observes that a more or less jaundiced hue of the white of the eyes, and skin about the breast, face, and is one of the most constant phenomena of this disease.

Dr Annesley says that the thirst is usually very great, and the skin hot and dry.

The pulse is usually full, active and firm; but in some instances it is small, tense, and quick; and this is said to be the case when the concave surface of the liver is the seat of the inflamation, and the functional surface of the stomach or colon participates in the inflamation.

The tongue is coated with a white or thick yellowish fur, and the taste is often bitter' or" it is smooth and glossy marked ~~with~~ by fissures and lobulated.

The bowels are usually costive; yet in many instances

of the disease in hot climates, diarrhea attends from the beginning of the disease (Chisholm)
The degree of violence of the bowel affection" says" Dr Johnson will very generally indicate the degree of rapidity and danger of the hepatic inflamation.
A burning sensation in egacuating the contents of the bladder almost invariably occurs; and the brain often sympathises strongly with the liver in this affection, giving rise to more less mental aberations.
Acute Hepatitis hastens on with great rapidity in hot climates to the point of resolution or suppuration, frequently in six or seven days.
It has been observed that an abscess forms in the liver when the local pain is trifling as when it is intense.
Dr Clarke relates a case where suppuration began on the fifth day of the disease and on the twenty-ninth the abscess burst, destroying almost the whole of the right lobe of the Liver.
In cases of Hepatitis originating in warm climates

suppuration of the liver is extremely rare.
That suppuration will take place may be infer-
-ed from the pulse continuing full and frequent,
and the pain very severe, with rigors.
When an abscess has actually formed, the patient
experiences a sense of weight and throbbing in the
region of the liver, with irregular rigors, with night
sweats and other marks of hectic fever.
Hepatic abscess frequently proves fatal without
any escape of its contents, but at other times the
matter works its way out by one or other of the
four following ways. as related by Dr. Gregory.
Adhesions sometimes forms between the liver and
the parietes of the abdomen; the tumour becomes more
and more prominent; and the matter is discharged
by an external opening. The usual situation
of such a tumour is between the third and fourth
false ribs. Sometimes the abscess bursts pouring
its contents into the cavity of the abdomen which

frequently brings on peritoneal inflamation which quickly proves fatal. Occasionally the matter finds its way into the colon or stomach by ulceration; and patients have recovered where there was reason to believe that such an event had taken place.
Lastly it is by no means uncommon for abscess of the Liver to form a communication with the cavity of the thorax by erosion of the diaphragm. Pus will then be discharged (along with bile generally) by the bronchia giving rise to the very curious symptom of bilious expectoration; but the patient seldom recovers.
Dr Eberle relates an instance in which an enormous quantity of thin reddish pus was discharged from an hepatic abscess through the Lungs, followed by a perfect recovery of the patients health. Schottmann relates two cases of a similar character and successful termination. Dr Ainsley also confirms those opinions.

Dr Wilson denies that recovery ever takes place.
It is supposed by Dr Sanders that in this form of Hepatitis the capillaries of the hepatic artery are exclusively implicated in the inflamation; and that in the chronic form the vena porta is the seat of inflamation.
The same opinion is expressed by Professor Pichelt; and Winslow ascribes both varieties to an inflamed state of the vena porta. There is certainly no good reason why the capillaries of the vena porta should not become the seat of inflamation; and when we take into consideration the peculiarity of the hepatic circulation, the opinion of Dr Sanders is not without considerable plausibility.

Diagnosis.

Parts far remote from the Liver frequently sympathize with the affected organ. For elucidation — the pain in the right hypocondriac region extends to

the right Clavicle and shoulder and sometimes to the left. Dr Louis, I think says, those symptoms are not always characteristic of the disease - that they are frequently present in diseases of the pulmonary organs.

Dr Amesley observes that where there is pain in the right shoulder it is characteristic of disease in the right lobe of the Liver, but frequently this symptom is not present and the young Practitioner who has been taught to look for this symptom in the disease, finding it absent supposes the organ to be perfectly healthy - and in this way many unfortunate beings are hastened to an untimely grave -

Hepatitis can easily be distinguished from Pneumonia. In Pneumonia the patient suffers extremely from oppression and cough, much more indeed than is experienced in Hepatitis.

The attitude in which patients keep themselves in

those diseases are very different. In Hepatitis the patient cannot lye on the unaffected side whereas on the other hand the Pneumonic patient cannot rest on the ~~affected~~ side without experiencing excruciating pain.

It is true that when the substance of the Lungs is diseased, the patient cannot rest on the sound side, that by so doing the difficulty of breathing and also the pain is increased. In Pneumonia respiration is carried on by the abdominal muscles and diaphragm whereas in Hepatitis it is performed entirely by the intercostal muscles. the chest being dilated and collapsed by the act of respiration whilst the abdominal muscle are perfectly at rest.

The diagnosis between Hepatitis and Peritonitis is very obvious. In the last mentioned disease the pulse is almost always small or contracted and weak whilst in the former disease the pulse is full and hard.

Gastritis is attended with great debility in the first attack of the disease and any thing taken in the in the stomach is almost invariably thrown up.
In the first attack of Hepatitis debility does not take place or immediate prostration and though vomiting frequently takes place, it does not always occur when any indigestable substance is taken into the stomach.
They can also be distinguished by using pressure - by pressing on the Epigastric region you excite violent pain in Gastritis whereas it will cause no unpleasant sensation in Hepatitis whereas pressure on the right hypocondrium will increase pain in the latter disease and will not produce any uneasiness in the former.
Spasm of the gall-ducts produced by the passage of biliary calculi can very easily be distinguished from Hepatitis. The former disease is attended with little or no fever. The pulse seldom or very rarely rising above 90 beats in a minute. with frequent intermission of pain. In the latter the patient seldom is exempt from or free from pain.

Causes

Dr Saunders and some other writers of considerable eminence in the medical profession, believe that this disease is produced in warm climates by a certain miasm existing in the atmosphere. There can exist but little doubt at this period of Bovino-miasmata or vegatable putrefaction producing the disease; or as I believe more properly acting as a predisposing cause. we know that miasmata has the power of deranging the biliary functions and in conjunction with this cause which is constantly acting with its deleterious on the functions of the Liver. high atmospheric heat combined. the Liver is in an habitual state of functional derangement; and the last exciting cause, such as cool mornings and evenings imprudence in diet. and consequent gastric derangement. the immoderate use of spirituous liquors &c, will be very apt to produce inflammation in the biliary organs.

Dr James Johnson observes that there exists great sympathy between the extreme vessels of the vena portarum of the Liver, and the cutaneous exhalents, or in other words that there exists the greatest sympathy between the secretions of the Liver and the perspiration - and that whatever increases or decreases the cutaneous exhalents has a similar effect on the secretions of the Liver.

Knowing therefore as we do, how atmospheric heat increases perspiration we cannot be at a lost to determine the cause of the so frequent occurrence of Hepatitis in hot climates - The excessive perspiration which is the product of warm climates by its continuance produces debility of the capillaries which is immediately communicated to the vessels of the Liver, and produces torpor in those vessels -

The capillaries from their excessive and long continued action, become extremely sensible to the slightest degree of cold, so, when the temperature of the atmosphere

is suddenly changed as during the night, by cold dews which is frequently case in hot climates, the capillaries are struck torpid or are congested as it were, and the sympathy is communicated to the ~~cells~~ of the liver, and they become paralized. the circulation is impeded, and inflamation is the consequence.

Another fact which goes to prove that this sympathy does exist between the skin and liver is this, In chronic Inflamation of the liver the skin is always harsh and dry and it is with the greatest difficulty to excite of the exhalents of the skin.

Treament

In this, as in all other inflammatory affections we should commence our treatment with copious bloodletting, we have a two-fold reason in thus commencing, the first is to lessen the general circulation, and the other to relieve the congestion of

the liver and portal vessels. Our object should be to subdue the general phlogistic condition as early as possible in order to favour the action of Mercurials. the speedy action of which we have chiefly to depend on for success.

As soon as we have lessened arterial action by the frequent use of the lancet, we should administer a mercurial cathartic. From 20 to 25 grains of Calomel should be administered followed three or four hours afterwards by a dose of oleum ricini; or an infusion of senna and manna constitutes a very efficient purgative in this disease.

If after the action of the medicine the arterial action still keeps up, we bled again, and continue our bleeding until the action is subdued entirely or moderated.

and this will probably be the result, in the disease as it occurs in mild climates.

In very warm climates one or two efficient bleedings will be sufficient to reduce the action of the pulse. Constant purging is requisite from the condition of the liver: as we see in some other diseases;. For instance the yellow Fever: Bilious remittent and Bilious pneumonia.

In those diseases a large quantity of vitiated bile is secreted, which imparts a stimulus to the nervous system, that will aggravate all the worst symptoms and which the loss of no quantity of blood will subdue or even mitigate unless it be purged off as soon as secreted. This is the reason Dr Potter says, why some Authors maintain that bloodletting is not as good in this disease as in other inflamitory affections. After we have lessened arterial reaction both by general and local bloodletting. for local bloodletting in my opinion is an indispensable remedy in this, as in all other inflamy diseases. We should apply blisters over the region of the liver. with moderate purgation.

The exhibition of opium in combination with Calomel in this disease, particularly after the violence of the Phlogistic

excitement has been partially subdued by venesection was long ago recommended by Dr. R. Hamilton; and has since his time been sanctioned by the ablest Practitioners.
"I know from ample experience says Dr. Johnson, "that in conjunction with Antimonial powder, opium forms an excellent auxiliary to mercury in Acute Hepatitis, not only soothing many uneasy sensations of the patient but determining to the surface and promoting a diaphoresis which is of great importance in this, as in most other affections.
"Dr Armstrong speaks in the most exhalted terms of opium in Hepatitis" and Dr. Gregory says it has produced very happy effects in his practice. But bloodletting and Calomel are chiefly to be relied on.
The administration of Calomel in divided doses in combination with opium. say four or five gr. of Calomel with 1 gr. of opium. or probably not not as much. in addition to which add two or three gr. Pulvis Antimonialis which proves beneficial in two different ways. First by its Diaphoretic effect and secondly by assisting mercurial action.

And experience teaches us that without this action our efforts to relieve our patient will be vain; and the disease hastens on to a fatal termination - which frequently takes place in a few days -

Whilst those articles are given we should occasionally administer a dose of castor oil, or some one of the saline purgatives. When the disease attacks very violently as it does almost always in hot climates, and when we are doubtful whether we can produce a salivation by the internal use of Calomel - we should apply it externally by friction - One or two drachms of mercurial ointment may be rubbed in on the legs, arms daily - where ptyalism appears to be tardy in its appearance.

After bleeding has been carried to a sufficient extent blisters are very useful applied over the whole right hypocondriac and Epigastric regions - Their application greatly relieves local pain - and by creating a termination to the external surface over the inflamed liver tend greatly to subdue the local inflamation

As auxiliaries to bleeding, Calomel and Purgatives,

Antimonials will be useful when the stomach is not too irritable - The Pulvis antimonialis in doses of two or three grains, in combination with Calomel, and opium, as already mentioned or Sulphate of Potash, every three or four hours; and to assist the action of those remedies the warm or tepid bath will be found useful -
We should in the last stage of the disease administer cooling drinks, the antiphlogistic regimen; arrow root, barley water, barely sufficient to support life; and cool air; is an indispensible requisite -
When the inflamation has gone to suppuration which is announced by rigors, night sweats, a sense of sinking about the Precordia, a dull throbbing pain about the region of the liver - and a fullness about the margin of the ribs - The further employment of mercury should be abandoned -
Poultices should be constantly employed with a view to the External pointing of the abscess -
After the abscess has formed we should evacuate

the bowels regularly though gently which may be done with five or six gr. Calomel, followed by one of the neutral purgative salts.

When the abscess does not point outwards we can do very little else than palliate the symptoms as they rise, and wait for the determination.

In cases when the abscess does point outwardly and the fluctuation of the matter can be felt, a puncture should be made into it and suffer the matter to be discharged. But we should not undertake this operation hastily or before the matter has made its way sufficiently to the external surface of the organ, or before the part at which it points has formed adhesions to the opposite part of the abdominal parietes.

We should always be certain that abscess actually exist, and that the tumour does not proceed from an accumulation of bile in the gall-bladder.

After suppuration has taken place, and the matter found a favorable exit, there is no remedy which will afford so much benefit as the nitro-muriatic acid. It may be employed internally and externally. Equal parts of nitric and muriatic acid is the proportion in which they are usually employed. From a half to a drachm of this mixture, diluted in a sufficient quantity of water may be taken daily; or the foot and leg may be immersed every morning in a warm bath, of the strength at first, of half an ounce of the acid mixture to a gallon of water, and afterwards gradually increased.
When the abscess has opened into the Lungs, and the system becomes much exhausted, and the digestive powers impaired, we should ~~support~~ support the system by Tonics.

Finis

Remarks

On The

Medical Theories

Of

Brown, Cullen, & Rush.

By

Hiram King

"Think, read, and observe. Observe, read and think for yourselves."

Rush.... An Introductory Lecture

An Inaugural Dissertation

For

The Degree

of

Doctor of Medicine

Submitted

To The Examination

Of The

Medical Professors

The

Provost

And The Trustees

Of The

University of Maryland

March 1834

To

The Medical Professors
of the
University of Maryland.

Gentlemen

To a heart glowing with lively impressions of gratitude, and having an opportunity of acknowledging in this public manner, the favours conferred by the kind hands of freindship must afford sensations of the purest kind that theel in the human bosom. For the politeness, with which you have always honoured me, I shall ever retain an heart-felt remembrance; and be assured, Gentlemen, that no possible change in life can ever lessen that real affection which is now so fervent in the bosom of

Your sincere friend

The Author.

Preliminary.

That every candidate for medical honors shall give to the public some specimen of his acquirements, is a duty imposed on him by the laws of the university; and with the view solely of discharging this duty, I submit the following essay.

It will be found to contain remarks, or criticisms, on the theories of three medical characters of the first eminence in the profession; whether they be just or not, the reader must determine. To the candid and discerning, it will be a sufficient apology for imperfections in style, &c. to observe; that owing to particular circumstances, the author had but a short time (only a part of that, allotted to this purpose) to write the essay in; and little or none to correct it. To readers of any other description, no appeal is made.

An Inaugural Thesis, &c

Medical Philosophers may be properly divided into two classes: Experimenters and Theorists; both of whom have carried their prejudices to extremes. It is no uncommon thing, to hear the experimenter boast much of the importance of his experiments; the facility with which they were made, and the many hidden mysteries they so plainly lay open; at the same time loudly vociferating against the fallacy of theory: not recollecting that "to think is to theorize," and that "without thinking, that is, without theorizing," he could not draw a conclusion even from his own experiments. While, on the other hand, we see the theorist, not only relying exclusively on speculation, but also deserting those paths which should alone be followed, in all theoretical pursuits. Shamefully neglecting that grand maxim, of "proceeding only from things known," which should always be his rallying point, perpetually his polar star: we see him illiberally passing over facts that would militate against, twisting others from their natural meaning imagining those that never existed; and, out of these slender, these little materials, erecting medical fabrics, that must

inevitably fall before the first breath of reason... Thus shamefully abusing the beautiful science of cause and effect.

But, although these objections may be brought against the abuse of theory, they certainly cannot be applied to theory, when it is conducted on rational and proper principles.

Since, then, "to think is to theorize", we must all theorize who think on medicine. As much the illiterate quack, who gives his pills to sweeten the blood, or to purify the urine; as the philosophic practitioner, who bleeds to relieve suffocated excitement, and thus resuscitate the strangulated blood vessels. The difference consists in their manner of theorizing. The one proceeds in that order, which has been laid down by the wisdom of former ages, and approved by the experience of past ages; taking such positions only, as are known to be true, and drawing his inductions from preceding facts. While the other proceeds disorderly, without either method or science to assist him, and forms his opinions, either from popular reports, upon imaginary truths, from very weak reasoning, or, what is more frequently the case, without any reason at all.

Having made these remarks, we shall not pause further, to prove the utility of correct theory, when applied to the science of medicine;

but shall just observe, that in forming theories of our own we should proceed with caution; and when those of others are offered us, we should view them with a critical and a jealous eye. Thus, while correct principles are much to be wished for on the one hand, so the hasty rejection of those that are false, are dangerous, as equally desirable on the other.... But, to return ~~[illegible]~~ to the experimenters.

Have this set of medical philosophers banished error from our science; diffused light on all the subjects they have attempted to investigate; and placed medicine on as simple, and as sure a footing as the mathematics? No: very different indeed. They have opposed contradiction, with contradiction; refuted one error, with another; and multiplied doubts on many physiological points. Thus, for instance, the doctrine of absorption has been bandied about by hundreds; now fairly proved to take place, and now as fairly disproved ever to occur.

But we should not be surprised, to find experiments run counter, when we consider the variety of changes to which the system is liable. To expect the same results from an experiment,

made on the body in high health, while every part performs with vigor its natural function; and the same experiment, made when the body is diseased and debilitated, would betray the grossest ignorance of the animal oeconomy.

From the great number of experimenters, only a few, we believe have benefited the science of physiology; and of these, the Abbe Spallanzani stands among the highest. Upon the subject of fecundation, he is truly meritorious. It was this great Italian who first raised the curtain of nature, and dared to look with boldness on her secrecy; nay, he did more he qualified himself by industry, and became an actor on her stage.

But, for this one instance of worth and ingenuity in our experimenters, we have many, where no confidence should be placed in their opinions. Nor is Spallanzani entirely an exception. Although his experiments are decisive and invaluable, yet, the conclusions drawn from them are not so plausible. Thus, after having impregnated the ovum of the female, by touching it with the semen of the male frog, he concludes, that the tadpole pre-existed in the ovum; and that the semen

only stimulated it into existence. But what are his arguments? Let him answer for himself; he could not discover a difference between the impregnated and unimpregnated ovum, by inspecting them with his glass; poor reasoning: a very ridiculous theory: Rash philosopher, bigotted experimenter, can your powerful glass distinguish, between an atmosphere, loaded with contagion, and one that is not contaminated? No, surely it can not; and yet, as surely, an important difference does exist.

But it may be asked, if this be not the correct method of accounting for fecundation; what is the process? We believe it to be entirely chemical; the male semen uniting with the female ovum, and producing a third something, differing from them both in its properties. Thus, upon adding an acid to an alkali, they unite to form a test ium quid; the properties of which are also entirely different from those of the materials which compound it. The reason why we have a neutral salt in the one instance, and a factus in the other is simply, because the matter of the two is different. This we conceive to be the whole phaenomenon of

fecundation. To say that the semen stimulates the ovum, and thus vivifies the foetus, is giving no explanation at all; we hardly know what it means; surely no one will be so absurd as to say, that the acid stimulates the alkali, and thus produces the neutral salt.... But we wander from our subject; it is not the process of fecundation we propose considering; but the medical theories of Brown, Cullen, ~~Hahnemann~~ and Rush

Pardon this digression. We now hasten with pleasure to the task; and shall begin with the

Brunonian Theory

Since boldness of thought and originality of conception appear to be the rage, the grand criterion by which we are to judge of an author's merit, and almost the ne plus ultra of his desire we shall inquire into the claim that doctor Brown has to originality: but, previous to our doing this, it will be proper to sketch the outlines of his theory.

That property in the animal system, which renders it alive to the impression of stimuli, or by which actions are produced,

when certain agents are applied, Brown calls the excitability; the agents he calls exciting powers, or stimuli; and the actions produced he calls excitement

The excitability is supposed to be an unit; that is when stimulus is applied to one part of the system, it produces a certain effect in that part and, by means of the unity, in the excitability, also produces the same effect, more or less, in every other part.

The exciting powers of stimuli are supposed to be of great variety; but to differ from each other, only in their degree of stimulus

The excitement, also is supposed to vary only in degree.

When the excitability, exciting powers, and excitement are at a medium, and equal in degree, the system is said to be in a state of perfect health; when the excitement is increased much above or below what is natural, the system is said to be diseased

All diseases are reduced to two kinds, called Sthenic or Asthenic.

Sthenic when the excitement is increased.

Asthenic when it is diminished.

7 When a portion of the exciting powers is abstracted, the excitability becomes accumulated. And when they are applied in an excessive quantity, an exhaustion of it follows.

When the excitability is accumulated, even a moderate stimulus will produce an increased excitement or sthenic disease: and when it is nearly exhausted, it requires a powerful stimulus to produce any effect.

When a deficient portion of stimulus is applied to the system, the excitement becomes diminished, and direct debility is induced. And when stimulus has been applied, in an excessive quantity the excitement also becomes diminished; and the system is then said to be in a state of indirect debility. Both of these debilities are classed together under the general term of asthenic disease; but with this difference, that, in direct debility, the excitability is accumulated; while in indirect, it is exhausted.

The cure of asthenic disease is to be effected by the application of stimuli; as opium, musk, volatile spirits, brandy a nourishing diet, &c While sthenic disease is to be cured by the abstraction of stimuli; as by blood-letting, purging, cool air, low diet, &c.

Having thus stated the grand fundamental principles of the Brunonian theory; we now proceed to bring into view the principles of one or two ancient authors; and leave the reader to determine how far Dr. Browns claim to originality may be just.

There appears to be something like periodical revolutions in the science of medicine. As far back as the days of Hippocrates, we find the humoral pathology was the prevailing doctrine; and the terms, morbific matter, and concoction, also nature, were as familiarly used then as those of irritability, stimulus and excitement, are at the present day. This doctrine was succeeded, about three hundred years afterwards, by that of Asclepiades, which rejected much of the humoral pathology. This was again followed by one proposed by Thimison, the pupil of Asclepiades, which placed disease altogether in the solids. Sometime after this, Galen revived the humoral pathology; which continued, more or less, in every medical system, down to the times of Hoffman and Cullen. These medical worthies again introduced the pathology of the solids; and humoral pathology is now nearly exploded. From the theories of Asclepiades and Thimison, we think Brown may have profited something;

at any rate, the features of his theory and the features of theirs have a strong family likeness.

Asclepiades asserted, that matter, considered in itself, was of an unchangeable nature; that all perceptible bodies were composed of a number of smaller bodies, between which there were interspersed an infinity of small spaces, totally devoid of all matter.

He thought that the soul itself was composed of these small bodies. He laughed at the principle called nature by Hippocrates, and also at the imaginary faculties said by him to be subservient to her; he also maintained, that nothing happened or was produced without some cause; and that, was called nature, was a reality, no more than matter, and motion. From this last principle he inferred, that Hippocrates knew not what he said when he spoke of nature as an intelligent being, and ascribed qualities of different kinds to her. According to him Hippocrates and other physicians attended their patients rather with a view to observe in what manner they died, than in order to cure them; and this under pretence that nature ought to do all herself, without any assistance."

For an account of the principles of Asclepiades, the reader may consult the history of Medicine, contained in the Encyclopaedia. But it is the theory of Themison that, we think, bears a considerable analogy to Browns.

Themison divided all diseases into two or at most into three kinds. He first included diseases arising from stricture; the second, those arising from relaxation; and the third, those of a mixed nature, or such as partook both of stricture and relaxation.

He said, that all disorders, whatever their nature or origin might be, under any of the above mentioned kinds, ought to be treated precisely in the same way, in whatever country, and with whatever symptoms, they happen to arise.

Themison was old when he laid the foundation of this methodic sect; and it was only brought to perfection by Thessalus, who lived under the emperor Nero. Galen and Pliny accuse this physician of intolerable insolence and vanity; and report, that he gave himself the air of despising all other physicians; and so intolerable was his vanity, that he assumed the title of Conqueror of Physicians; which he caused to be put upon

his tomb in the asperian way."

From these extracts the reader will perceive, that Asclepiades ridiculed the doctrine of nature's curing disease, some hundred years before Brown did, and pretty much in the same way; and that his opinions concerning matter and motion may probably have suggested the ideas of excitability and excitement.

And also, that Themison had long ago anticipated Brown in attempting to simplify medical science, by reducing all diseases to the two principal and opposite kinds of stricture and relaxation; for Brown has, eighteen hundred years after him, only done the same. The difference consists only in the different terms they use, to express the same state of the system. Themison was sanguine in his principles; so was Brown. Themison declares that the symptoms, climate, &c. that may be connected with a disease, cannot at all alter its mode of cure, provided we ascertain the class to which it belongs; so does Brown, in every part of his work.

As Browns disciples zealous and dogmatic? So were the followers of Themison; even so much so, that Thessalus had the presumption

to style himself Conqueror of Physicians.
Having thus briefly shewn the analogy between the Brunonian theory and the combined theories of Asclepiades and Themison, we proceed to examine its merits.
In doing this, we shall not notice the theory of any particular disease; as for instance, of fever which the doctor erroneously supposes to consist in debility; and we shall also pass over many other points, on which criticisms might be offered. We shall attack only a few fundamental principles; thus striking, as it were, at the pillars of his doctrine; knowing, that if these give, the whole fabric must tumble.
Dr Brown supposes, as will be seen by consulting his theory, that there is a kind of unity in the excitability, by means of which, when one kind of excitement, either increased or decreased, takes place in one part of the system, it will also take place more or less in every other part. Now according to this position, two diseases cannot exist in the system at the same time.
For, as a disease consists only in different degrees of excitement can exist in the same part at the same time; and, as the excitement

existing in one part must, by the unity of the excitability, exist, more or less in every part; it follows, that fever which is a disease of the blood vessels, and the venereal disease, which is seated in the glands, cannot exist together in the system, because the venereal action in the glands must be extended to the blood vessels also, and thus prevent the fever. But were it possible for a fever to occur, then, at that point where the venereal action ceases, and the febrile one commences, there would be a kind of tertium quid; which, we believe, has never been discovered. Again, we often see high excitement in the blood vessels, during a paroxysm of fever, while the muscles are preternaturally weak. And, on the other hand, the excitement of the muscles in tetanus and other convulsive affections, is highly increased, while the action of the blood vessels remains little or not at all affected. These facts, we take it, are strongly opposed to unity in the excitability; for, according to this, the muscles ought during a fever to be preternaturally strong, instead of being preternaturally weak; and vice versa, the blood vessels should partake of the increased action of the muscles, in convulsive diseases.

The Brunonian theory asserts, that there is no other difference between the various stimuli that act on the system, than what exists in their degree of force or stimulating power. According to this doctrine, if a sufficient quantity of brandy be taken, which is a strong stimulus it ought to support life without the aid of food; but this we know, is quite the contrary.... Again the idea of one stimulus differing from another, only in degree of force, is entirely set aside by one or two familiar facts. Thus, Cantharides when taken into the stomach, act by their stimulus on the urinary organs, and frequently inflame the bladder; while tartar emetic, also taken into the stomach, acts particularly on this organ and increases its motion; the stimulus of jalap purges by acting on the intestines; the stimulus of opium acts upon the system at large, producing hilarity &c; that of sound acts upon the ears, of light upon the eyes, and of heat upon the general surface; but it is the stimulus of food only, that nourishes and supports the body. From these facts, it is clear, that stimuli have been, by others, improperly divided into specific; or in other words, that different

stimuli are peculiarly adapted to act on different parts of the system. This theory supposes disease to consist only of a variation in the degree of common or healthy excitement. If this be all that constitutes disease it is obvious, that a person passing through all the different degrees of excitement, during the exercise of the day, untill his system, at night arrives at the point of indirect debility, when sleep comes on, must, before that state can be induced, pass through every grade sthenic disease; as through the rheumatism, peripneumonia, catarrh &c.; and that during the state of sleep, he must be labouring under cholic, cholera, diabetes or some other of the asthenic diseases; This must be the conclusion because rheumatism, catarrh, peripneumonia, and all other sthenic diseases, are supposed to consist in an increased excitement only, which must exist somewhere on the scale between the points of indirect debility and perfect health; of course the system, in its progress to indirect debility, having to pass through all the intermediate degrees between those two points, must also pass through all the sthenic diseases, before that

state can be induced, and consequently before sleep can take place. In fine, we should labour under sthenic delirium every day, and under asthenic every night. These, however, are absurdities so great, that no one would advance them; and yet these are really the inductions to be drawn from the above principles.

It is contended, in the theory we are considering, that indirect debility is always attended with an exhaustion of excitability; and that it can be cured, only by stimulating remedies. Whether the first part of this position be correct or not, may probably remain doubtful, though the following fact would seem to militate against it: thus if a person fatigues himself suddenly, as by riding fast on horseback when not accustomed to it, or by any other fatiguing exercise, and a glass or so of wine be now taken, it will produce twice the effect the same quantity would have done before, and will frequently intoxicate; which we think can only be accounted for, by supposing that in this instance, the fatigue or indirect debility is accompanied with an increase of excitability.

The latter part of the above position, however we are sure is incorrect, and common experience proves it. For instance the induced debility that is brought on by exercise during the day, as by walking, riding, labouring, &c is removed or cured during the night; not by the application of stimuli; but by their abstraction; as by rest a recumbent posture, silence, darkness, &c. Having thus shewn, that indirect debility can be cured and frequently is, by the abstraction of stimuli; let us examine the propriety of attempting to cure it on the stimulating plan. For instance a stimulus has brought on indirect debility, and, according to Brown an exhaustion of excitability; yet another stimulus of a different, we are told, will find a small portion of excitability remaining, and by acting on it will produce excitement; and thus by degrees remove the indirect debility. Admitting a new stimulus may find a small portion of excitability remaining, and produce excitement by acting on it, still nothing is gained; for this stimulus in its turn must exhaust that remaining portion; and of course, instead of removing the debility, sink the system lower than it was before.

Lastly, strict reasoning on the Brunonian principles will lead to an egregious error; it will prove, direct debility can never occur. Thus, it is received as an established law of the excitability, stimulus, and excitement, that the excitability becomes accumulated in proportion to the abstraction of stimuli; and also, that stimuli act and produce excitement, in proportion to the accumulation of excitability. Now, reasoning from these principles, it will appear, that direct debility can never take place: for instance, suppose that all the different stimuli that act upon the system are as 40°; and, that, acting upon the excitability at 30°, they produce healthy excitement at 20°; it is obvious, if you abstract 10 degrees of stimuli, you accumulate the excitability 10°, and the remaining 30 degrees of stimuli, acting upon the excitability now accumulated to 40°, will still produce healthy excitement, at 20°; for stimulus acts, in proportion to the accumulation of excitability. So on, extend the reasoning and principles as far as you please; still they will lead to the above conclusions. They will also prove, that neither increased action nor indirect debility can ever be induced; and in fine, that the

excitement, and excitability must remain stationary; all of which, however, we know is incorrect.

Thus then we see, that the Brunonian theory like a rocket ascending on a dark evening, was calculated to draw attention, only for the moment, pleasing by its splendour; to afterwards explode and disappear forever. Although we have been so unsparing in objecting to this theory of Dr Browns, let it not be presumed we are insensible of its author's merit, or would wish for a moment, to treat him with the least disrespect.

We admire and revere his talents; and trust we have handled his opinions with that freedom only, to which the works of great men should be subjected.

We view Brown as the first, among the moderns, who began to clear away the rubbish from our science; as a pioneer in Medicine, who has cut the road for thousands: and we reflect with regret on his misfortunes. If, therefore, we have trodden roughly on his ashes, it was not intended as Honour to his genius!... Fame to such of his opinions as are true; and oblivion to the errors of his head and heart.

Cullenian Theory

It would be a difficult and tedious task, to follow Dr. Cullen through all his theories, or rather his conjectures, of different diseases; and our time will not permit it. We shall therefore notice, only his theory of fever for this is his principle, and almost his only one; that has attracted the attention of physicians.

The reader is referred to the author's First Lines for a full detail of his theory; we shall, however give its general features.

Certain debilitating powers applied to the system, diminish the energy of the brain, and thus bring on torpor, or debility, which soon produces the cold fit. When this occurs, a certain power in the system, called the vis medicatrix naturæ, is excited into action, in order to remove this cold state and debility; and which to effect this, induces a spasm on the extremities of the arteries, particularly of those that terminate on the surface of the body. This spasm acts as an irritant to the heart and arteries, and increases their action, which constitutes the hot fit of fever; this removing the debility and cold stage immediately on its

taking place, and finally, the spasm itself; the system returns to its former state of health.

To give a summary in the author's own words, upon the whole, our doctrine of fever is explicitly this: the remote causes are certain sedative powers, applied to the nervous system, which diminishing the energy of the brain, thereby produce a debility in the whole of the functions, and particularly in the action of the extreme vessels.

Such, however, is, at the same time, the nature of the animal oeconomy, that this debility proves an indirect stimulus to the sanguiferous system; whence, by the intervention of the cold stage and spasm connected with it, the action of the heart and arteries is increased, and continues so until it has had the effect of restoring the energy of the brain, of extending this energy to the extreme vessels, of restoring therefore their action, and thereby especially overcoming the spasm afflicting them; upon the removal of which, the execution of sweat, and other marks of the relaxation of excretories take place." Cullens First Lines, Paragraph XIVi

This theory was not original with Cullen; he took it from Hoffman; Hoffman from Van Helmont; and probably Van Helmont may have taken it from some other. However, it is certain that Cullen has improved the original doctrine, filtered it from the humoral pathology, added many facts and extended the principles. The vis medicatrix naturæ, so long and so well known in the schools of medicine, constitutes the basis of this theory. But, in whatever shape we admit this hobby, whether as the autocratia of Hippocrates, the archeus of Van Helmont, the anima medica of Stahl, or the vis medicatrix naturæ of Hoffman and of Cullen; still if intelligence be granted it, we must expect to meet with feeble and vague theory. To account for any phenomenon by referring it to the agency of this power, is not accounting for it at all. It would be just as good reasoning to say a thing is so because it is so. If, however the term vis medicatrix naturæ, have been used to express only a peculiar property in the system, we do not see its great difference from our modern excitability; and from this circumstance, that Cullen, as well as Hoffman, criticised on the opinions of Stahl, who granted an intelligence to his anima medica,

we should suppose that he used the expression in this sense only. But this was not the case; for however absurd the doctrine of Stahl may have appeared to Cullen, yet, when difficulties arise, and explanations are scarce, we always find him to take shelter under his sanctuary; which like the horns of an altar, protect him from the adversaries of his theory.

Good the nature then of Dr Cullens theory it can admit of few remarks; we shall therefore not refrain any longer, but overset it at once, by denying him his vis Medicatrix. But as there are some powerful facts which stand forth in defence of this doctrine, we thinks it our duty to state them. Thus it has been observed by John Hunter, that when the broken ends of a bone fractured are placed in apposition, they throw out osseous matter, into which the old vessels shoot; and thus the bone becomes reunited; this is common and is not surprising. But he has also observed that if the broken ends, instead of being placed nicely together, lap over each other, ~~[illegible]~~ so as to bring their smooth surfaces into contact, osseous matter is thrown out from these smooth sides, into which the vessels shoot;

And the bone as in the former instance becomes reunited. It is easy, we say, to conceive how the vessels of the broken ends of a bone, may throw out osseous matter, and thus unite the bone; but how, or from what cause, the vessels of one smooth surface, which is in contact with another, should throw out bony matter, and produce an union between them; can not be easily accounted for.

Again, Astley Cooper has observed, that when a divided intestine is united with the needle, and returned into the abdomen and the wound heals, the ligature, instead of sloughing off, from the peritoneal side of the intestine, and thus lodging in the cavity of the abdomen, where it would prove injurious; is universally thrown off into the cavity of the intestine and discharged with its other contents. Although these, with some other facts that could be mentioned, would argue something like intelligence in the operations of the system; still we are not disposed to adopt this doctrine. For though we cannot now explain these facts, on the laws of physical necessity, yet this may be owing to our imperfect acquaintance with those laws;

and hereafter, when our views of them become more enlarged, we may be able to explain, not only these, but many other difficulties. But if we admit this doctrine of intelligence in the operations of the system; what shall we gain? Surely nothing: on the contrary it will check the thirst of inquiry, and lead to the erroneous conclusions, that nature alone is sufficient to cure disease, and that either medical assistance is either hurtful or superfluous. This doctrine, however, should not be admitted for a number of reasons; but particularly, because we have others, that are much more satisfactory. Thus, the animal system is capable of being affected, when exposed to the action of certain agents: and this capability depends on certain properties or qualities, natural to the system, and coeval with its formation, and which is also regulated by certain laws. Now, by this one clue, we are enabled to penetrate the labyrinth of nature, and plant directing posts at every corner. For instance, when certain debilitating powers have been applied to the body, its actions become diminished, generally; but particularly in the heart and arteries.

hence these propel the blood, with less force, to their extremities, which, in consequence, fall into a collapsed, not a spasmodic state; hence we account for the paleness, shrinking, and coldness of the skin, and, in short, for all those symptoms which constitute the cold stage of fever.

But the capability for action, or in other words, the excitability becomes accumulated in consequence of the debility, for this is one of its laws. Of course the common stimuli or agents, as the aliment, blood, secretions, heat, air, &c. acting on an increased capacity, must produce an increased action, which will be the greatest in those parts possessing the greatest capacity: but this capacity is the greatest in the heart and arteries, in consequence of the great debility, with which they are affected during the cold stage; hence their action becomes increased, the blood is driven with vigor to the surface, an increase of secretions takes place, which are attended with an increase of heat, the collapsed state disappears, flushing come on; and hence, in fine, we explain all the symptoms of the hot stage of fever. Many of the minutiae, which are not mentioned here, are also easily explained on these principles.

Thus, then, are we able to account for all that occurs in fever, not by the vis medicatrix naturæ, but simply by a natural property of the system... A property as the poet has beautifully expressed it,

"By firm immutable, immortal laws
"Impress'd on nature by the great first cause."

We shall now proceed to point out some inconsistencies, to be found in Dr. Cullens Theory.

It will still, (says the author speaking of Spasm) however, remain a question, what is the cause of this spasm; whether it be directly produced by the remote cause of fever, or if it be only a part of the operation of the vis medicatrix naturæ. I am disposed to be of the latter opinion, because in the first place, while it remains still certain that debility lays the foundation of fever, it is not obvious in what manner the debility produces the spasm, and what seems to be its effect, the increased action of the heart and arteries; secondly, because, in almost all cases, in which an effort is made by the vis medicatrix naturæ, a cold a cold fit and a spasm are almost always the beginnings of such an effort PXLI and XLIII.

From this, it is obvious, that the author supposes spasm to be a part of the operation of the vis medicatrix naturæ; but he afterwards commits himself in the following quotation: "I suppose, (says he) that in every fever there is a power applied to the body, which has a tendency to hurt and destroy it, and produces in it certain motions, which deviate from the natural state; and at the same time, in every fever which has its full course, I suppose that in consequence of the constitution of the animal oeconomy, there are certain motions excited, which have a tendency to obviate the effects of the noxious powers, or to correct and remove them. Both these kinds of motion are considered as constituting the disease. But the former is perhaps strictly the morbid state, while the latter is to be considered as the operation of the vis medicatrix naturæ, of salutary tendency, and which I shall hereafter call the reaction of the system.

Upon the supposition that these two states takes place in every paroxysm of fever, it will appear to be chiefly in the time of the hot stage that the reaction operates in removing the morbid state; and therefore, as the operation succeeds more or less quickly, the hot stage of paroxysms will be shorter or longer.

But as the length of paroxysm depends chiefly upon the duration of the
hot stage, so the longer duration of this and of paroxysms must be owing either
to the obstinacy of resistance in the morbid state, or to the weakness of the salutary
action, and it is probable that sometimes the one, and sometimes the other
of these circumstances takes place." It seems to be only by the state of the
spasm that we can judge of the resistance of the morbid state of fever, and
with respect to this spasm I observe, that either the causes exciting it
may be different in different cases, or, though the cause should be the
same in different persons, the different degree of irritability in each may
give occasion to a greater or less degree of spasm, and therefore, the
reaction in fever being given, the continuance of the hot stage,
and of the whole paroxysm, may be longer or shorter, according to the
of spasm that has been formed." PP. VIII, IX, and XII
From these quotations it is plain, that our author is guilty of an inconsistency,
or contradiction in principles. In the first instance, he believes the spasm to be a
part of the curative operation of the vis medicatrix naturae, and assigned his
reason for this belief; but, in the second, considers it as a part of the morbid
state, and supposes that the obstinacy, or rigidity, with which it resists the
reaction of the vis medicatrix naturae, or the weakness with which this power

is performed, may account for the difference between the duration of one paroxysm of fever, and another. But again, the Dr. tells us that a spasm is induced on the extremities of the arteries during a cold fit of fever: "It is particularly observed, that during the cold stage of fever, there seems to be a spasm induced every where on the extremities of the arteries, and more especially of those upon the surface of the body" P. XLI; and soon after observes, "But at the same time, it seems to me probable, that during the whole course of the fever, there is an atony subsisting in the extreme vessels, and that the relaxation of the spasm requires the restoring of the tone and action of these." P. XLIII.

Now, we really cannot conceive how the opposite states of spasm and relaxation can exist at the same time in the extreme arteries or vessels; Probably it may be said, the author means, that only the extreme ends of the extreme vessels, are affected with spasm, while the other portion of these vessels remains in an atonic or debilitated state. The doubt whether this was Cullen's idea; however, if it were, we shall show it to be inconsistent, from a quotation we shall presently bring forward, with those he

has advanced an other path; thus.... One cause (says he, when speaking of the obstinacy of spasm) of the obstinacy of spasmodic fevers may be clearly perceived. In inflammatory diseases there is diathesis phlogistica prevailing in the body, and this diathesis we suppose to consist in an increased tone of the whole arterial system. When, therefore, this diathesis accompanies fever, as it sometimes does, it may be supposed to give occasion to the febrile spasms being formed more strongly, and thereby to produce more protracted paroxysms. Accordingly we find, that all inflammatory fevers are of the continued kind; and that all the causes of the diathesis phlogistica have a tendency to change intermittents into continued fevers. Continued fever, then, being often attended the diathesis phlogistica, we conclude that, in many cases, this is the cause of their continued form." P. 10 X.

Here, then, one author has accounted for the production of continued fevers. But let us examine this: How is it possible for the spasm to owe its rigidity to a phlogistic diathesis; or for an atony to subsist in the extreme vessels, during the presence of such a diathesis; or lastly, for this diathesis to

occur without immediately removing both the spasm and atony? For we are told it consists "in an increased tone of the whole arterial system," and again, that "during the whole course of fever there is an atony subsisting in the extreme vessels, and that the relaxation of the spasm requires the restoring of the tone and action of these." Now, will not the occurrence of a phlogistic diathesis, or increased tone of the whole arterial system, remove the atony and spasm altogether, instead of increasing the rigidity of the latter? And where now rests the doctors explanation of continued fevers?

After writing the above, we expected to have found further and more important remarks on Cullen's theory, by the perusal of an octavo volume, entitled, "Observations on the old systems of Physic," by Dr Brown, whose theory we have already considered; and where really surprised at finding scarce an observation worth noticing. He misrepresents Cullen's meaning, by quoting half sentences, and intermixing with them his own remarks. He is also extremely

illiberal, abusive, and vain throughout; as a proof of this, the following quotation will be sufficient:

"This heat" (Cullen's theory) "the feeble, half vital, semi-production of phrenzy, the staveling of strained systematic dulness, the forlorn outcast of the fostering care to which it owed its insect vitality, was now to be pampered by a crude and indigestible nutriture, collected from all the materials which had composed the sensual fabrications of former erroneous systems, was now to be decorated with every foreign plumage; and in this, its totally borrowed and heterogeneous form, instead of the hideous caricature, which it was, continued to excite the derision of mankind; it was to be ostentatiously obtruded upon the world as a new and respectable doctrine, and held up, forsooth, as the formidable rival of a splendid system.

Notwithstanding this rancour, this phrenzy, this specimen of fury and malice, he think considerable apologies may be offered for its author. For it must be remembered, that Brown was once the inmate and confidential friend of Cullen;

whose system of medicine he defended at all times, and against all who opposed it, and yet, after this, to be crossed, disappointed, opposed, and kept down in every exertion to rise, by the very man from whom he should have expected support, was no small mortification, and could not fail to cool the fervour of his friendship. Again, Brown was the author of what he termed or at least, conceived a splendid system; and which certainly stood high on the lists, for medical merit; to find this opposed and ridiculed, himself neglected and persecuted, was enough to make him thus harrow up the doctrines of his preceptor, to pour his whole soul on paper, and to write as bitter as gall. But we digress: it is not our province to extenuate the foibles of Brown: let us hide them in forgiveness, and hail him in the language of Young

"..... all thy good
Now blazes; all thy guilt is in the grave."

Young. Revenge.

To return—We shall conclude these remarks on the bulletin

theory of fever, by observing, that although the author has been unsuccessful in his speculations here, as on many other occasions, we must not omit to pay due homage to his memory. For his accuracy in observing an describing the symptoms of disease, and for his numerous and important facts, he was not excelled even by Sydenham himself. Notwithstanding his errors in Theory, we must still view Dr. Cullen as an improver in our science... as a star of the higher order, in the firmament of medicine

Dr. Rush's Theory

Comes next under our consideration. We propose to review the doctors theory of fever only, because he applies this, with but little variation, to all other diseases, or rather, to all other forms of disease.

A summary of this theory, is briefly as follows. according to the author, there are four causes concerned in the production of fever; first, the remote; second, the predisposing; third, the exciting; fourth the proximate.

The remote causes. These are certain agents which when applied to the system, produce debility. The predisposing causes. This consists in debility, which may be of two kinds; viz. direct, and indirect: direct, when from a deficiency of stimulus. indirect, when from an excess of stimulus. Both of these if suddenly induced, are accompanied with an accumulation of excitability but, if of a chronic nature, they are both attended with an exhaustion of this property. It is only under the first of these circumstances that either cannot act as a predisposing cause. The terms debility from abstraction and debility from action, have been substituted by the author, for those of direct and indirect debility; in consequence of the tendency which the use of these terms have had to associate his principles with those of Dr Brown. The exciting causes. These are certain irritants or stimulants, which acting on the accumulated excitability, produce irregular or convulsive action in the blood vessels. The proximate cause, is the disease or fever itself: and consists of the above irregular, convulsive, or as the

author terms it, morbid action of the blood vessels: arguments are adduced to substantiate each of the above positions; but the author dwells particularly on the opinion, that the morbid action is of an irregular or convulsive kind; and, the more to confirm this, draws the analogy between the action of the blood vessels in fever, and the action of the nervous system in convulsive diseases; which proves to be close in a number of instances. Now this view of the general leading principles of Dr Rush's theory, the difference between it and Dr Brown's, must appear obvious. However, this point has been disputed; and therefore, in order to render the dissimilarity the more striking, we shall quote the author's own words. "From the view, I have given of the state of the blood vessels in fever the reader will perceive the difference between my opinion and Dr. Brown's on this subject. The doctor supposes fever to consist in debility... I do not admit debility to be a disease, but place it wholly in morbid excitement, invited and fixed by previous debility. He makes a fever to consist in a change only of the natural

action of the blood vessels... I maintain that it consists in a preternatural and convulsive action of the blood vessels. Lastly. Dr Brown supposes excitability and excitement to be equal in fever... My theory supposes fever to be the reverse of this. It consists in equal or divided excitement and excitability. Health consists in the equality and conformity of them both; and the business of medicine, as I shall say hereafter, is to equalize them in the case of fever, that is, to abstract their excess from the blood vessels, and extend them to other parts of the body.

Although from this quotation, the difference between the two theories, is plainly delineated; yet there appears to be mistatement of the Brunonian theory, which we presume, was by no means, intended. "Dr Brown says our author, supposes excitability and excitement to be equal in fever." This is certainly not his theory; for Brown we know was of the opinion, that fever is a disease of direct debility, and of course, that the excitement and excitability are equal, to wit, the excitement diminished, and the excitability accumulated. Dr Brown though, also supposed, that the excitement and excitability are nearly equally affected, in every part of the system, during a paroxysm of fever;

that is, that when the excitement is diminished in the blood vessels, it is also diminished, more or less, in every other part. It is this opinion, we presume, that Dr Rush alludes to, and we presume so, because his own theory entirely rejects this idea of Brown, or and supposes, that the excitement may be, and is in fever, preternaturally increased, in the blood vessels while it is preternaturally diminished in the muscles. Having thus stated, as briefly as we could, Dr Rush's theory of fever, the principles of which, as before observed, he applies to all other forms of disease; and shown, in his own words, wherein it differs from Dr Browns; we shall proceed to notice some objections that have been brought against it. One objection which has been much urged to this theory, is that it confounds the proximate cause with the fever or disease itself. This we admit is the case: but it is an error in language only, not in ideas, and of course, an objection of this kind will carry with it but little weight. Besides, the author speaks of the proximate cause as the disease itself, only in uniformity to custom, and uses the expression, as he tells us himself, in common with with Cullen, Boerhaave, Gaubius, and others. To say that a cause and its effect can be the

same, would certainly be very poor logic; but this theory advances no such a position. For, as before observed, it supposes four causes, concerned in the production of fever, viz. the remote, predisposing, exciting and proximate: the remote causes produce debility, which is the predisposing cause; and the exciting causes, acting on this, produce the proximate, consisting in an irregular convulsive or morbid action; which, in correct language, should be called the fever itself; but which might be called by any other name, provided it conveys a correct ideas of its peculiar nature. Although we do not contend for incorrect language, in works of science, but, on the contrary, think it should be rejected as soon as possible; yet since in this instance, the ideas it conveys are clear and connected, we hope this objection will cease to be brought forward; and that instead of reasoning from words, we may learn to reason from ideas. It has also been objected to this theory, that it supposes fever, and other forms of disease, to consist in morbid action; while the author, tells us that in syncophy and asphixia, there is an absence of all motion. In replying to this it must be observed, that

Syncopy is frequently the effect of mere debility, and takes place when no morbid action is present; or, it may also occur after violent morbid action, in which case it is owing to a suppression of morbid excitement, and may be considered as a kind of second indirect debility, where little or no action is present; although probably in no instance does motion cease entirely. Another objection that has been advanced is, that, "according to this theory, fever has two predisposing causes, debility and a disposition to preternatural motion in animal matter; or a connection between excitability and debility." The urger of this objection was certainly not acquainted with the theory; or he wished to misrepresent it. For it by no means inculcates that debility is one predisposing cause, and a disposition to preternatural motion in animal matter another. It will appear clear to the reader of the smallest penetration, that this disposition to preternatural motion, is only another name for an accumulated excitability; and he will also perceive, that debility can never act as a predisposing cause of fever, or any other form of disease, unless accompanied with this "disposition;" so that, instead of each constituting a

predisposing cause, they must be combined to constitute the one.
Having thus endeavoured to answer some objections that have been opposed to Dr Rush's theory we shall now mention one or two others that may be proposed. In doing this, we shall not pause to make an apology to its author; for we are too well acquainted with his liberality, (witness the fearlessness with which he relinquished his long taught doctrine of dejection) and are too well convinced of his love of truth, to suppose our doing so will give the least offence. This theory asserts, that "there is but one remote cause of fever, and that is stimulus. p 132.
But, it asserts in other parts, that cold, excessive evacuations, fear &c. all of which, we know, are directly debilitating, instead of being stimulants, and frequently induce the debility of predisposition: of course they must be considered as remote causes.
Again a morbid action seated in the blood vessels, particularly in the arteries, is supposed to constitute the proximate cause of fever; and this morbid action is affirmed to be a convulsive one...
I go on (says the doctor) to remark that a fever, when not misplaced, consists in morbid excitement, and irregular action in

the blood vessels, more especially in the arteries:" and again "this irregular action, is in other words, a convulsion in the sanguiferous, but more obviously in the arterial system." p 134. This, as before observed, the doctor endeavours to support by analogy between the febrile action of the sanguiferous system, and the convulsive action of the nervous system.
But this is analogical reasoning, and can amount to no more than probability; independent, however, of this, the single circumstance of the arteries naturally propelling the blood by a convulsive action, must strongly oppose the idea that their morbid action when it occurs, also consists in a convulsive one. Although the above objection must militate against the opinion, that a convulsive action constitutes the morbid one in fevers, it does not at all lessen the utility of the term morbid action; for by it we mean only diseased action, and it is not of much consequence in what this particularly consists, provided we know the causes that produce it, can distinguish it when present, and are able to remove it. Upon the whole Dr Rush's theory we consider as possessing many

advantages. Common observations compose the materials, and simplicity only is studied in its construction. It breaks down those artificial barriers which have subdivided disease and draws the mind of the student from the complexity of nosology, to view with less confusion the simplicity of morbid excitement,... an expression which contains an abridgment of nosology;... an affection which by simply varying in its seat, or degree of force exhibits specimens of all the classes, orders, genera, and species. Such then is a short sketch of the theory of fever of Dr Rush my account is taken from the fourth volume of his Medical Inquiries and Observations. As that learned and elegant work has undergone a new edition I have no doubt it has appeared when retouched by the pen of its able author, in a form that will render it free from the objections that have been brought against it. But in consequence of my not being able to procure the last edition, I content my self with the present one. In the meantime while we have not the least hesitation in saying it explains the phenomena of fever much better, and leads to more successful practice,

than the spasmodic theory of the learned Cullen, or than the debilitated theory of the great, though unfortunate Brown. In thus taking my final adieu of you, Illustrious Professors, suffer me to add, that I am not solicitous about the fate of my Essay; for conscious of its imperfections it is with pleasure I reflect, that it will soon be hidden by that mantle which in time covers even works of merit, ... not only scientific merit, but merit of every kind. Thus the poet:

"Deep whelm'd beneath, in vast sepulchral caves
"Oblivion dwells, amid unlabell'd graves;
"The stonie tomb, the laurell'd bust overturns,
"And shakes their ashes from the mould'ring urns."

End.